GSM TELEPHONE

GT-P7320

SERVICE Manual

GSM TELEPHONE

CONTENTS

1. Safety Precautions
2. Specification
3. Product Function
4. Exploded View and Parts list
5. MAIN Electrical Parts List
6. Level 1 Repair
7. Level 2 Repair
8. Level 3 Repair
9. Reference data

Notice: All functionality, features, specifications, and other product information provided in this document, including but not limited to, benefits, design, pricing, components, performance, availability, and capabiliti -es of the product are subject to change without notice. Samsung reserves the right to alter this doc -ument or the product described herein at anytime, without obligation to provide notification of such changes.

1. Safety Precautions

1-1. Repair Precaution

Before attempting any repair or detailed tuning, shield the device from RF noise or static electricity discharges.

Use only demagnetized tools that are specifically designed for small electronic repairs, as most electronic parts are sensitive to electromagnetic forces.

Use only high quality screwdrivers when servicing products. Low quality screwdrivers can easily damage the heads of screws.

Use only conductor wire of the properly gauge and insulation for low resistance, because of the low margin of error of most testing equipment.
We recommend 22-gauge twisted copper wire.

Hand-soldering is not recommended, because printed circuit boards (PCBs) can be easily damaged, even with relatively low heat. Never use a soldering iron with a power rating of more than 100 watts and use only lead-free solder with a melting point below 250°C (482°F).

Prior to disassembling the battery charger for repair, ensure that the AC power is disconnected. Always use the replacement parts that are registered in the SEC system. Third-party replac ement parts may not function properly.

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

1-2. ESD(Electrostatically Sensitive Devices) Precaution

Many semiconductors and ESDs in electronic devices are particularly sensitive to static discha rge and can be easily damaged by it. We recommend protecting these components with cond uctive anti-static bags when you store or transport them.

Always use an anti-static strap or wristband and remove electrostatic buildup or dissipate static electricity from your body before repairing ESDs.

Ensure that soldering irons have AC adapter with ground wires and that the ground wires are properly connected.

Use only desoldering tools with plastic tips to prevent static discharge.

Properly shield the work environment from accidental electrostatic discharge before opening packages containing ESDs.

The potential for static electricity discharge may be increased in low humidity environments, such as air-conditioned rooms. Increase the airflow to the working area to decrease the chance of accidental static electricity discharges.

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

2. Specification

2-1. GSM General Specification

	GSM850	EGSM 900	DCS1800	PCS1900	WCDMA 2100	WCDMA 900	LTE FDD3	LTE FDD7	LTE FDD20
Freq. Band[MHz] Uplink/ Downlink	824~849 869~894	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990	1922~1977 2112~2167	880~915 925~960	1710~1785 1805~1880	2500~2570 2620~2690	791~821 832~862
ARFCN range	128~251	0~124 & 975~1023	512~885	512~810	UL: 9612~9888 DL: 10562~10838	UL: 2712~2863 DL: 2937~3088	UL: 1200~1949 DL: 19200~19949	UL: 2750~3449 DL: 20750~20449	UL: 6150~6449 DL: 24150~24449
Tx/Rx spacing	45MHz	45MHz	95MHz	80MHz	190MHz	45MHz	95MHz	120MHz	-41MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	3.84Mcps	3.84Mcps	9Mbps/s (at 10MHz BW)	9Mbps/s (at 10MHz BW)	9Mbps/s (at 10MHz BW)
Time Slot Period/ Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	FrameLength: 10ms Slotlength: 0.667ms	FrameLength: 10ms Slotlength: 0.667ms	FrameLength: 10ms Slotlength: 0.5ms	FrameLength: 10ms Slotlength: 0.5ms	FrameLength: 10ms Slotlength: 0.5ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	0.3GMSK	QPSKHQPSK	QPSKHQPSK	QPSK 16QAM 64QAM	UL : QPSK 16QAM DL : QPSK 16QAM 64QAM	UL : QPSK 16QAM DL : QPSK 16QAM 64QAM
MS Power	33dBm~5dBm	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm	24dBm~ -50dBm	24dBm~ -50dBm	Max:23±2.7dBm Min:-49dBm	Max:23±2.7dBm Min:-49dBm	Max:23±2.7dBm Min:-49dBm
Power Class	5pcl ~ 19pcl	5pcl ~ 19pcl	0pcl ~ 15pcl	0pcl ~ 15pcl	3(max+24dBm)	3(max+24dBm)	Class3	Class3	Class3
Sensitivity	-102dBm	-102dBm	-100dBm	-100dBm	-106.7dBm	-106.7dBm	-94dBm/ 10 MHz	-95dBm/ 10 MHz	-94dBm/ 10 MHz
TDMA Mux	8	8	8	8	8	8	-	-	-
Cell Radius	35Km	35Km	2Km	2Km	2Km	2Km	5Km	5Km	5Km

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

2-2. GSM Tx Power Class

TX Power control level	GSM850
5	33±2 dBm
6	31±2 dBm
7	29±2 dBm
8	27±2 dBm
9	25±2 dBm
10	23±2 dBm
11	21±2 dBm
12	19±2 dBm
13	17±2 dBm
14	15±2 dBm
15	13±2 dBm
16	11±3 dBm
17	9±3dBm
18	7±3 dBm
19	5±3 dBm

TX Power control level	EGSM900
5	33±2 dBm
6	31±2 dBm
7	29±2 dBm
8	27±2 dBm
9	25±2 dBm
10	23±2 dBm
11	21±2 dBm
12	19±2 dBm
13	17±2 dBm
14	15±2 dBm
15	13±2 dBm
16	11±3 dBm
17	9±3dBm
18	7±3 dBm
19	5±3 dBm

TX Power control level	DCS1800
0	30±3 dBm
1	28±3 dBm
2	26±3 dBm
3	24±3 dBm
4	22±3 dBm
5	20±3 dBm
6	18±3 dBm
7	16±3 dBm
8	14±3 dBm
9	12±4 dBm
10	10±4 dBm
11	8±4 dBm
12	6±4 dBm
13	4±4 dBm
14	2±5 dBm
15	0±5 dBm

TX Power control level	PCS1900
0	30±3 dBm
1	28±3 dBm
2	26±3 dBm
3	24±3 dBm
4	22±3 dBm
5	20±3 dBm
6	18±3 dBm
7	16±3 dBm
8	14±3 dBm
9	12±4 dBm
10	10±4 dBm
11	8±4 dBm
12	6±4 dBm
13	4±4 dBm
14	2±5 dBm
15	0±5 dBm

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

3. Operation Instruction and Installation

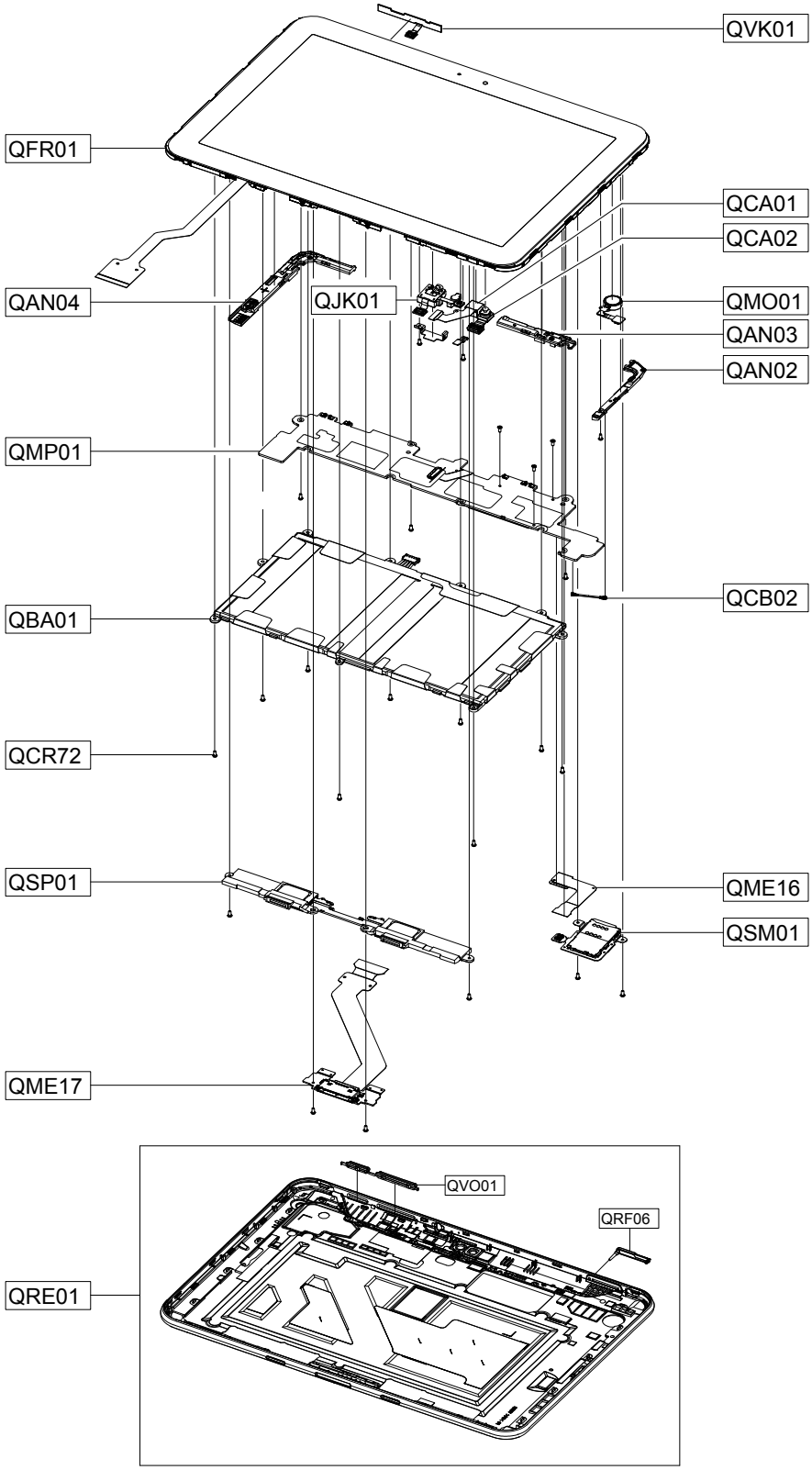
Main Function

- Android OS: Honeycomb
- HSPA+ 42Mbps / HSUPA 5.76Mbps / LTE 100/50
- 3MP AF with LED Flash
- 8.9 WSVGA TFT Full Touch (C-Type)
- S-GPS / BT v3.0 USB v2.0 / WiFi (802.11 a/b/g/n)
- Recording 720p / Playback 1080p
- Sensors: Accelerometer, Magnetic, Gyro, Light
- Additional :
  - 1.5GHz Dual Core CPU
  - Application store / Voice & Motion UI
  - Multi-touch, Multi-task manager

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

4. Exploded View and Parts List

4-1. Cellular phone Exploded View



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

4-2. Cellular phone Parts list

Design LOC		Description	SEC CODE
QCR72		SCREW-MACHINE	6001-002051
QMO01		MOTOR LINEAR VIBRATION-MOTOR+FPCB+CONN A	GH31-00545A
QCB02		CBF COAXIAL CABLE-17.5MM (SGH-I957)	GH39-01515A
QAN02		INTENNA-SGH-I957_BT	GH42-03250A
QAN03		INTENNA-SGH-I957_GPS	GH42-03251A
QAN04		INTENNA-GT-P7320 MAIN	GH42-03445A
QBA01		INNER BATTERY PACK	GH43-03548A
QVK01		KEY FPCB-PWR/VOL	GH59-10952A
QJK01		ASSY ETC-EARJACK FPCB	GH59-10977A
QME16		ASSY ETC-I/F LCD CON TO CON	GH59-10997A
QME17		ASSY ETC-I/F 30PIN FPCB	GH59-10998A
QSP01		MODULE-1712_SPK_MODULE	GH59-11040A
QCA02		CAMERA MODULE-2M VT(I957)	GH59-11567A
QMP01		A/S ASSY-PBAMAIN(COMM)GT-P7320	GH82-06257A
QCA01		ASSY CAMERA-3M MODULE(GT-P7300)	GH96-05319A
QSM01		ASSY MODULE-SIM SOCKET	GH96-05369A
QFR01		ETC ASSY-LCD ASSY(SVC)	GH97-13181A
QRE01		ASSY CASE-REAR_SVC	GH98-22742A
	QVO01	PMO KEY-POWER/VOLUME	GH72-64028A
	QRF06	PMO COVER-SIM	GH72-64031A

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

5. MAIN Electrical Parts List

SEC CODE	Design LOC	Description
0403-001688	D1000,ZD1000	DIODE-ZENER
0404-001250	D102,D103,D700,D701	DIODE-SCHOTTKY
0404-001317	D600,D601	DIODE-SCHOTTKY
0404-001669	D1100	DIODE-SCHOTTKY
0406-001239	U1507,ZD1002	DIODE-TVS
0406-001267	ZD100	DIODE-TVS
0406-001375	D602,ZD1001,ZD1003	DIODE-TVS
0406-001375	ZD1004,ZD1005,ZD1006	DIODE-TVS
0406-001375	ZD1007,ZD1008,ZD1010	DIODE-TVS
0406-001375	ZD1011,ZD1012,ZD1013	DIODE-TVS
0406-001375	ZD1014,ZD1015,ZD103	DIODE-TVS
0406-001375	ZD1301,ZD600,ZD601	DIODE-TVS
0406-001375	ZD701,ZD800,ZD900	DIODE-TVS
0406-001375	ZD901,ZD902,ZD903	DIODE-TVS
0406-001375	ZD904,ZD905,ZD906	DIODE-TVS
0406-001375	ZD907,ZD910,ZD911	DIODE-TVS
0406-001375	ZD912	DIODE-TVS
0406-001413	ZD101,ZD1016,ZD1017	DIODE-TVS
0406-001413	ZD1018,ZD1019,ZD102	DIODE-TVS
0406-001413	ZD908,ZD909	DIODE-TVS
0406-001452	ZD1020	DIODE-TVS
0504-000168	Q700,TR700,TR800	TG-DIGITAL
0504-000168	TR801	TG-DIGITAL
0504-001113	Q100,Q1400	TG-DIGITAL
0505-001325	Q801	FET-SILICON
0505-002748	Q800,TR802,TR803	FET-SILICON
0505-003052	U109,U701,U805	FET-SILICON
0601-002779	LED1300	LED
0801-003016	U806	IC
0801-003022	U703,U801	IC
0801-003065	U110	IC
0801-003265	U804	IC
0902-002783	UCP400	IC

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

SEC CODE	Design LOC	Description
0904-002596	U1103	IC
1001-001481	U1403	IC
1001-001528	U102,U111	IC
1001-001546	U203	IC
1001-001635	U1405	IC
1001-001720	F104	IC
1003-002132	U1401	IC
1003-002216	U1402	IC
1003-002277	U1500	IC
1108-000437	UME400	IC
1201-002608	U100	IC
1201-003273	PAM201	IC
1201-003277	PAM202	IC
1201-003279	PAM203	IC
1201-003280	PAM200	IC
1202-001121	U1001,U903	IC
1203-004776	U1104	IC
1203-004818	U906	IC
1203-004819	U1202,U1300,U904	IC
1203-005069	U1404	IC
1203-005074	U1100	IC
1203-005373	U1003	IC
1203-005599	U1106	IC
1203-006392	U1000	IC
1203-006724	U802	IC
1203-006781	U803	IC
1203-006794	U1002	IC
1203-006862	U1301	IC
1203-006983	U700	IC
1203-006985	U104	IC
1203-007001	U702	IC
1203-007002	U600	IC
1203-007140	U1107	IC

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

SEC CODE	Design LOC	Description
1205-003692	U900	IC
1205-003943	U403	IC
1205-004055	U1400	IC
1205-004204	U302	IC
1205-004284	UCP600	IC
1205-004285	U1200,U1201	IC
1205-004292	U202	IC
1205-004313	U1101	IC
1205-004342	U1105	IC
1209-001997	U1504	IC
1209-002006	U105,U106	IC
1209-002041	U1502	IC
1209-002045	U1503	IC
1404-001165	VR100	THERMISTOR-NTC
1404-001225	VR700,VR701	THERMISTOR-NTC
1405-001317	VR1000	THERMISTOR-NTC
2007-000137	R815,R825	R-CHIP
2007-000138	R1415,R1418,R1419	R-CHIP
2007-000138	R1421	R-CHIP
2007-000140	R107,R713	R-CHIP
2007-000141	R1003,R1004,R1112	R-CHIP
2007-000141	R1113,R1300,R1301	R-CHIP
2007-000141	R1512,R1513,R1515	R-CHIP
2007-000141	R1516,R206,R207,R907	R-CHIP
2007-000141	R908,R909,R910	R-CHIP
2007-000143	R1002,R1200,R1201	R-CHIP
2007-000143	R1202,R1400,R1401	R-CHIP
2007-000143	R1404,R1407,R1408	R-CHIP
2007-000143	R1409,R1416,R1417	R-CHIP
2007-000143	R1504,R1505	R-CHIP
2007-000148	R1001,R1027,R1410	R-CHIP
2007-000148	R1411,R1426,R1429	R-CHIP
2007-000148	R444,R449,R450,R610	R-CHIP

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

SEC CODE	Design LOC	Description
2007-000148	R728,R948,R949	R-CHIP
2007-000151	R1033	R-CHIP
2007-000157	R1032,R1116,R1117	R-CHIP
2007-000157	R1118,R1119,R1422	R-CHIP
2007-000162	R1038,R142,R712,R714	R-CHIP
2007-000162	R716,R819,R821,R823	R-CHIP
2007-000162	R828	R-CHIP
2007-000163	R1309	R-CHIP
2007-000164	R1009,R1206	R-CHIP
2007-000166	R1017,R1018	R-CHIP
2007-000167	R1008	R-CHIP
2007-000170	R1013,R1102,R1402	R-CHIP
2007-000170	R1506	R-CHIP
2007-000172	R1103,R1104,R1423	R-CHIP
2007-000172	R803	R-CHIP
2007-000636	R1005	R-CHIP
2007-000758	R100,R144,R147,R829	R-CHIP
2007-000758	R830	R-CHIP
2007-000775	R101	R-CHIP
2007-001294	R931	R-CHIP
2007-001298	R151,R820	R-CHIP
2007-001339	R1205	R-CHIP
2007-002796	R136,R137	R-CHIP
2007-003004	R220,R221	R-CHIP
2007-003010	R1525,R951,R952	R-CHIP
2007-003014	R1014,R1015	R-CHIP
2007-003015	R1036,R1037	R-CHIP
2007-003018	R219	R-CHIP
2007-003112	R418	R-CHIP
2007-007014	R412,R630	R-CHIP
2007-007092	R1035,R827	R-CHIP
2007-007099	R138,R139	R-CHIP
2007-007107	R705,R725	R-CHIP

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

SEC CODE	Design LOC	Description
2007-007132	R303	R-CHIP
2007-007135	R1503	R-CHIP
2007-007136	R208	R-CHIP
2007-007141	R417,R419	R-CHIP
2007-007142	R1025,R1028	R-CHIP
2007-007306	R822,R824	R-CHIP
2007-007318	R202,R641	R-CHIP
2007-007484	R420	R-CHIP
2007-007517	R400,R423,R424	R-CHIP
2007-007529	R1011	R-CHIP
2007-007573	R1012	R-CHIP
2007-007585	R930	R-CHIP
2007-007589	R143	R-CHIP
2007-007627	R1122	R-CHIP
2007-007981	R1502	R-CHIP
2007-008044	R1000	R-CHIP
2007-008045	R1414,R203	R-CHIP
2007-008052	R1115	R-CHIP
2007-008055	R1039,R1107,R1121	R-CHIP
2007-008055	R1307,R1308,R1524	R-CHIP
2007-008055	R744	R-CHIP
2007-008057	R1042	R-CHIP
2007-008211	R1526,R833	R-CHIP
2007-008213	R826	R-CHIP
2007-008275	R1016	R-CHIP
2007-008312	R956	R-CHIP
2007-008354	R145	R-CHIP
2007-008401	R933	R-CHIP
2007-008403	R1007	R-CHIP
2007-008419	R1029,R1030,R1500	R-CHIP
2007-008420	R1501,R1521,R231	R-CHIP
2007-008478	R1203,R1204	R-CHIP
2007-008516	R1108,R1111,R132	R-CHIP

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

SEC CODE	Design LOC	Description
2007-008516	R133,R1510,R305,R453	R-CHIP
2007-008516	R662,R912,R942	R-CHIP
2007-008564	R928,R929	R-CHIP
2007-008579	R301	R-CHIP
2007-008588	R1130,R1131,R600	R-CHIP
2007-008588	R601,R602,R938,R939	R-CHIP
2007-008633	C1003	R-CHIP
2007-008806	R201	R-CHIP
2007-009084	R1043,R927	R-CHIP
2007-009111	R621,R946,R947	R-CHIP
2007-009168	R1123	R-CHIP
2007-009171	R129,R403,R404,R405	R-CHIP
2007-009171	R406,R407,R408,R409	R-CHIP
2007-009171	R410	R-CHIP
2007-009199	R730,R801	R-CHIP
2007-009361	R232	R-CHIP
2007-009794	R831	R-CHIP
2007-009822	R1306,R832	R-CHIP
2007-009838	R1120	R-CHIP
2007-009866	R503,R504	R-CHIP
2007-009879	R901,R902,R915,R918	R-CHIP
2007-009879	R921,R922	R-CHIP
2007-010202	R306,R307,R308,R309	R-CHIP
2007-010233	R414,R623	R-CHIP
2203-000233	C1107,C1110,C113	C-CERAMIC,CHIP
2203-000233	C144,C159,C184,C185	C-CERAMIC,CHIP
2203-000233	C196,C205,C718,C754	C-CERAMIC,CHIP
2203-000233	C944,C963	C-CERAMIC,CHIP
2203-000254	C1004,C101,C639,C853	C-CERAMIC,CHIP
2203-000254	C858	C-CERAMIC,CHIP
2203-000278	C263,C849	C-CERAMIC,CHIP
2203-000386	C1121,C621,C843,C850	C-CERAMIC,CHIP
2203-000386	C923,C924	C-CERAMIC,CHIP

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

SEC CODE	Design LOC	Description
2203-000425	C434,C435,C905,C906	C-CERAMIC,CHIP
2203-000425	C938,C939	C-CERAMIC,CHIP
2203-000438	C736,C759,C865	C-CERAMIC,CHIP
2203-000679	C823	C-CERAMIC,CHIP
2203-000725	C1501	C-CERAMIC,CHIP
2203-000812	C1016,C1018,C112	C-CERAMIC,CHIP
2203-000812	C1304,C190,C192,C204	C-CERAMIC,CHIP
2203-000812	C845	C-CERAMIC,CHIP
2203-000854	C1123,C1153,C1154	C-CERAMIC,CHIP
2203-001153	C1022,C1023,C907	C-CERAMIC,CHIP
2203-001153	C908,C922,C925,C936	C-CERAMIC,CHIP
2203-001153	C937	C-CERAMIC,CHIP
2203-002687	C861	C-CERAMIC,CHIP
2203-002709	C102,C257,C267,C270	C-CERAMIC,CHIP
2203-005057	C1104,C1105	C-CERAMIC,CHIP
2203-005234	C104	C-CERAMIC,CHIP
2203-005393	C748,C749,C835,C836	C-CERAMIC,CHIP
2203-005682	C131,C140,C220,C221	C-CERAMIC,CHIP
2203-005682	C246,C261,C278,C279	C-CERAMIC,CHIP
2203-005682	C283,C287,C288,C289	C-CERAMIC,CHIP
2203-005682	C344,C345,C640,C641	C-CERAMIC,CHIP
2203-005717	C107,C114	C-CERAMIC,CHIP
2203-005719	C232,C234	C-CERAMIC,CHIP
2203-005725	C248,C249,C250,C251	C-CERAMIC,CHIP
2203-005727	C103,C1134,C1135	C-CERAMIC,CHIP
2203-005727	C304	C-CERAMIC,CHIP
2203-005736	C108,C110,C124,C125	C-CERAMIC,CHIP
2203-005736	C127,C128,C129,C130	C-CERAMIC,CHIP
2203-005736	C132,C133,C134,C135	C-CERAMIC,CHIP
2203-005736	C137,C147,C150,C151	C-CERAMIC,CHIP
2203-005736	C152,C154,C193,C194	C-CERAMIC,CHIP
2203-005736	C300	C-CERAMIC,CHIP
2203-005777	C274,C297,C298,C299	C-CERAMIC,CHIP

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

SEC CODE	Design LOC	Description
2203-005779	C305	C-CERAMIC,CHIP
2203-005789	C109	C-CERAMIC,CHIP
2203-005792	C227,C296,C343	C-CERAMIC,CHIP
2203-005968	C142	C-CERAMIC,CHIP
2203-006047	C854	C-CERAMIC,CHIP
2203-006048	C100,C1005,C1015	C-CERAMIC,CHIP
2203-006048	C118,C1401,C1402	C-CERAMIC,CHIP
2203-006048	C1403,C1404,C1405	C-CERAMIC,CHIP
2203-006048	C1412,C1413,C1414	C-CERAMIC,CHIP
2203-006048	C1415,C1416,C1420	C-CERAMIC,CHIP
2203-006048	C1421,C146,C1505	C-CERAMIC,CHIP
2203-006048	C1512,C1514,C1516	C-CERAMIC,CHIP
2203-006048	C223,C224,C225,C439	C-CERAMIC,CHIP
2203-006048	C700,C702,C705,C714	C-CERAMIC,CHIP
2203-006048	C737,C742,C746,C747	C-CERAMIC,CHIP
2203-006048	C753,C755,C758,C762	C-CERAMIC,CHIP
2203-006048	C763,C796,C797,C799	C-CERAMIC,CHIP
2203-006048	C822,C840,C844,C855	C-CERAMIC,CHIP
2203-006048	C915,C927,C940,C941	C-CERAMIC,CHIP
2203-006048	C943,C945,C952,C953	C-CERAMIC,CHIP
2203-006120	C336	C-CERAMIC,CHIP
2203-006123	C294	C-CERAMIC,CHIP
2203-006190	C440,C603,C604,C605	C-CERAMIC,CHIP
2203-006190	C606,C610,C611,C620	C-CERAMIC,CHIP
2203-006190	C622,C624,C625,C626	C-CERAMIC,CHIP
2203-006190	C627,C637	C-CERAMIC,CHIP
2203-006194	C1100,C1506,C164	C-CERAMIC,CHIP
2203-006194	C445,C446,C500,C507	C-CERAMIC,CHIP
2203-006194	C508,C554,C555	C-CERAMIC,CHIP
2203-006208	C803	C-CERAMIC,CHIP
2203-006257	C516,C517,C520,C529	C-CERAMIC,CHIP
2203-006257	C530,C531,C537,C539	C-CERAMIC,CHIP
2203-006257	C540,C547,C548,C550	C-CERAMIC,CHIP

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

SEC CODE	Design LOC	Description
2203-006257	C551,C552,C553	C-CERAMIC,CHIP
2203-006260	C1303,C812,C862,C951	C-CERAMIC,CHIP
2203-006260	C954	C-CERAMIC,CHIP
2203-006305	C314,C315,C320,C323	C-CERAMIC,CHIP
2203-006305	C328,C333,C334,C338	C-CERAMIC,CHIP
2203-006305	C341	C-CERAMIC,CHIP
2203-006324	C1313,C143,C308,C442	C-CERAMIC,CHIP
2203-006348	C1020,C1021	C-CERAMIC,CHIP
2203-006399	C1306,C1308,C1310	C-CERAMIC,CHIP
2203-006399	C1311,C1406,C1407	C-CERAMIC,CHIP
2203-006399	C1500,C1502,C216	C-CERAMIC,CHIP
2203-006399	C217,C422,C428,C430	C-CERAMIC,CHIP
2203-006399	C432,C614,C911,C912	C-CERAMIC,CHIP
2203-006399	C950,C955,C956	C-CERAMIC,CHIP
2203-006423	C1131,C1411,C208	C-CERAMIC,CHIP
2203-006423	C209,C210,C211,C218	C-CERAMIC,CHIP
2203-006423	C219,C231,C239,C311	C-CERAMIC,CHIP
2203-006423	C312,C701,C703,C715	C-CERAMIC,CHIP
2203-006423	C716,C720,C764	C-CERAMIC,CHIP
2203-006556	C1147,C1148,C1149	C-CERAMIC,CHIP
2203-006556	C1150,C1151,C1152	C-CERAMIC,CHIP
2203-006556	C168,C169,C170,C171	C-CERAMIC,CHIP
2203-006556	C172,C173,C174,C175	C-CERAMIC,CHIP
2203-006556	C176,C177,C178,C179	C-CERAMIC,CHIP
2203-006562	C1006,C1101,C1102	C-CERAMIC,CHIP
2203-006562	C1108,C1120,C1128	C-CERAMIC,CHIP
2203-006562	C1130,C1132,C1133	C-CERAMIC,CHIP
2203-006562	C1200,C1202,C1204	C-CERAMIC,CHIP
2203-006562	C1205,C1206,C1207	C-CERAMIC,CHIP
2203-006562	C1208,C1209,C1210	C-CERAMIC,CHIP
2203-006562	C1211,C1510,C1511	C-CERAMIC,CHIP
2203-006562	C1517,C322,C729,C743	C-CERAMIC,CHIP
2203-006562	C802,C856,C864,C900	C-CERAMIC,CHIP

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

SEC CODE	Design LOC	Description
2203-006562	C935,C949	C-CERAMIC,CHIP
2203-006665	C295	C-CERAMIC,CHIP
2203-006681	C1125,C852	C-CERAMIC,CHIP
2203-006707	C316,C318,C321,C327	C-CERAMIC,CHIP
2203-006707	C331,C339	C-CERAMIC,CHIP
2203-006824	C1302,C813	C-CERAMIC,CHIP
2203-006839	C212,C317,C325,C326	C-CERAMIC,CHIP
2203-006839	C332,C335,C340,C437	C-CERAMIC,CHIP
2203-006839	C708	C-CERAMIC,CHIP
2203-006841	C1002,C1011,C1417	C-CERAMIC,CHIP
2203-006841	C804,C863	C-CERAMIC,CHIP
2203-006844	C1124,C1127	C-CERAMIC,CHIP
2203-006872	C1109,C1158,C1312	C-CERAMIC,CHIP
2203-006872	C415,C438,C704,C825	C-CERAMIC,CHIP
2203-006872	C831,C832,C902,C903	C-CERAMIC,CHIP
2203-006872	C904,C913,C914	C-CERAMIC,CHIP
2203-006890	C138,C254	C-CERAMIC,CHIP
2203-006896	C155,C186,C187	C-CERAMIC,CHIP
2203-007133	C1019	C-CERAMIC,CHIP
2203-007210	C214,C613,C615,C623	C-CERAMIC,CHIP
2203-007210	C628,C629,C630,C631	C-CERAMIC,CHIP
2203-007210	C632,C634,C635,C769	C-CERAMIC,CHIP
2203-007210	C800,C809,C810,C811	C-CERAMIC,CHIP
2203-007230	C1009,C786,C795,C841	C-CERAMIC,CHIP
2203-007240	C600,C601,C609,C612	C-CERAMIC,CHIP
2203-007240	C734,C735,C738,C739	C-CERAMIC,CHIP
2203-007240	C740,C741,C750,C751	C-CERAMIC,CHIP
2203-007240	C752,C756,C757,C794	C-CERAMIC,CHIP
2203-007240	C798,C839	C-CERAMIC,CHIP
2203-007270	C1000,C1001,C1007	C-CERAMIC,CHIP
2203-007270	C1008,C1119,C1513	C-CERAMIC,CHIP
2203-007270	C1515,C406,C787,C842	C-CERAMIC,CHIP
2203-007270	C847,C848,C851	C-CERAMIC,CHIP

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

SEC CODE	Design LOC	Description
2203-007271	C1103,C1106,C1111	C-CERAMIC,CHIP
2203-007271	C1117,C1118,C1159	C-CERAMIC,CHIP
2203-007271	C1201,C1203,C1300	C-CERAMIC,CHIP
2203-007271	C1307,C1315,C1400	C-CERAMIC,CHIP
2203-007271	C1418,C1419,C226	C-CERAMIC,CHIP
2203-007271	C541,C544,C558,C559	C-CERAMIC,CHIP
2203-007271	C560,C564,C760,C859	C-CERAMIC,CHIP
2203-007271	C946,C947,C961,C962	C-CERAMIC,CHIP
2203-007279	C342,C607,C608,C773	C-CERAMIC,CHIP
2203-007317	C1112,C1114,C213	C-CERAMIC,CHIP
2203-007317	C310,C313,C901,C910	C-CERAMIC,CHIP
2203-007317	C957	C-CERAMIC,CHIP
2203-007342	C1126,C1503,C1504	C-CERAMIC,CHIP
2203-007342	C207,C413	C-CERAMIC,CHIP
2203-007385	C776	C-CERAMIC,CHIP
2203-007391	C1507,C400,C401,C402	C-CERAMIC,CHIP
2203-007391	C403,C404,C405,C407	C-CERAMIC,CHIP
2203-007391	C408,C409,C410,C411	C-CERAMIC,CHIP
2203-007391	C412,C423,C424,C425	C-CERAMIC,CHIP
2203-007391	C426,C427,C429,C431	C-CERAMIC,CHIP
2203-007391	C433,C443,C444,C509	C-CERAMIC,CHIP
2203-007391	C510,C512,C513,C514	C-CERAMIC,CHIP
2203-007391	C515,C518,C519,C521	C-CERAMIC,CHIP
2203-007391	C522,C523,C524,C525	C-CERAMIC,CHIP
2203-007391	C526,C527,C528,C532	C-CERAMIC,CHIP
2203-007391	C533,C534,C535,C536	C-CERAMIC,CHIP
2203-007391	C538,C543,C549,C556	C-CERAMIC,CHIP
2203-007391	C557,C561,C562,C563	C-CERAMIC,CHIP
2203-007391	C565,C566,C567,C7001	C-CERAMIC,CHIP
2203-007393	C1113,C1305,C200	C-CERAMIC,CHIP
2203-007393	C201,C202,C235,C256	C-CERAMIC,CHIP
2203-007393	C266,C269,C301,C309	C-CERAMIC,CHIP
2203-007393	C329,C330,C602,C616	C-CERAMIC,CHIP

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

SEC CODE	Design LOC	Description
2203-007393	C617,C618,C723,C728	C-CERAMIC,CHIP
2203-007393	C761,C765,C766,C767	C-CERAMIC,CHIP
2203-007393	C768,C770,C771,C774	C-CERAMIC,CHIP
2203-007393	C775,C778,C779,C780	C-CERAMIC,CHIP
2203-007393	C781,C782,C784,C789	C-CERAMIC,CHIP
2203-007393	C790,C791,C793,C801	C-CERAMIC,CHIP
2203-007393	C814,C816,C817,C818	C-CERAMIC,CHIP
2203-007393	C819,C820,C821,C824	C-CERAMIC,CHIP
2203-007393	C826,C828,C829,C833	C-CERAMIC,CHIP
2203-007393	C834,C846,C916,C917	C-CERAMIC,CHIP
2203-007393	C926	C-CERAMIC,CHIP
2203-007449	C203,C206,C706,C707	C-CERAMIC,CHIP
2203-007456	C1518,C1519,C1520	C-CERAMIC,CHIP
2203-007456	C932,C934	C-CERAMIC,CHIP
2203-007474	C506,C511,C542,C545	C-CERAMIC,CHIP
2203-007474	C619,C726	C-CERAMIC,CHIP
2203-007634	C1010,C1129	C-CERAMIC,CHIP
2203-007701	C1314,C222,C240,C264	C-CERAMIC,CHIP
2203-007701	C265	C-CERAMIC,CHIP
2203-007729	C419	C-CERAMIC,CHIP
2203-007759	C160	C-CERAMIC,CHIP
2203-007775	C1212,C1214,C1216	C-CERAMIC,CHIP
2203-007775	C1217,C1218	C-CERAMIC,CHIP
2203-007781	C709,C710,C711,C712	C-CERAMIC,CHIP
2203-007781	C713,C717,C719	C-CERAMIC,CHIP
2203-007790	C1122,C860	C-CERAMIC,CHIP
2203-007795	C805,C806,C807,C808	C-CERAMIC,CHIP
2203-007796	C153,C156,C229,C501	C-CERAMIC,CHIP
2203-007796	C502,C503,C504,C505	C-CERAMIC,CHIP
2203-007860	C730,C731,C732,C733	C-CERAMIC,CHIP
2203-007860	C788,C837,C838	C-CERAMIC,CHIP
2203-008095	C215	C-CERAMIC,CHIP
2404-001561	TA900,TA901	C-TA,CHIP

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

SEC CODE	Design LOC	Description
2404-001572	TA200,TA201	C-TA,CHIP
2409-001232	TA800	C-POLYMER ,CHIP
2703-001728	L135	INDUCTOR-SMD
2703-001734	L104,L134,L225	INDUCTOR-SMD
2703-001737	L101,L136	INDUCTOR-SMD
2703-001938	L121	INDUCTOR-SMD
2703-002200	L102	INDUCTOR-SMD
2703-002313	L100	INDUCTOR-SMD
2703-002314	L123	INDUCTOR-SMD
2703-002369	L124	INDUCTOR-SMD
2703-002649	L231,L235	INDUCTOR-SMD
2703-002842	L254	INDUCTOR-SMD
2703-002858	L220,L236	INDUCTOR-SMD
2703-002901	L126,L213,L241	INDUCTOR-SMD
2703-002903	L103,L106	INDUCTOR-SMD
2703-002907	L108,L227,L248,L286	INDUCTOR-SMD
2703-002955	L245	INDUCTOR-SMD
2703-002958	L107,L310	INDUCTOR-SMD
2703-002999	L232	INDUCTOR-SMD
2703-003534	L600	INDUCTOR-SMD
2703-003545	L306	INDUCTOR-SMD
2703-003685	L1100	INDUCTOR-SMD
2703-003897	L801,L802,L803,L804	INDUCTOR-SMD
2703-003908	L223,L226,L233,L238	INDUCTOR-SMD
2703-003908	L287	INDUCTOR-SMD
2703-003911	L1000,L1301	INDUCTOR-SMD
2703-003915	L120,L128,L129	INDUCTOR-SMD
2703-003917	L309	INDUCTOR-SMD
2703-003920	L253	INDUCTOR-SMD
2703-004000	L112,L113	INDUCTOR-SMD
2703-004013	L246	INDUCTOR-SMD
2703-004018	L222,L229	INDUCTOR-SMD
2703-004022	L1101	INDUCTOR-SMD

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

SEC CODE	Design LOC	Description
2703-004025	L702,L703,L704	INDUCTOR-SMD
2703-004030	L137	INDUCTOR-SMD
2703-004032	L206,L247	INDUCTOR-SMD
2703-004034	L105,L115,L125,L127	INDUCTOR-SMD
2703-004034	L237	INDUCTOR-SMD
2703-004035	L240	INDUCTOR-SMD
2703-004036	L131	INDUCTOR-SMD
2703-004038	L211,L230,L249,L250	INDUCTOR-SMD
2703-004081	L806	INDUCTOR-SMD
2703-004119	L251	INDUCTOR-SMD
2703-004127	L700,L701,L705,L706	INDUCTOR-SMD
2703-004127	L707,L708,L709	INDUCTOR-SMD
2703-004185	L116	INDUCTOR-SMD
2801-004466	OSC701,OSC800	CRYSTAL-SMD
2801-004836	OSC1100,OSC700	CRYSTAL-SMD
2801-005051	OSC300	CRYSTAL-SMD
2801-005110	OSC400	CRYSTAL-SMD
2809-001326	TCX800	OSCILLATOR-VCTCXO
2901-001625	F1100	FILTER-EMI/ESD
2901-001634	F1400	FILTER-EMI/ESD
2901-001647	F1101,F1102,F1300	FILTER-EMI SMD
2901-001647	F1301	FILTER-EMI SMD
2904-001847	F200	FILTER-SAW
2904-001988	F101	FILTER-GPS SAW
2904-001990	F100	FILTER-GPS SAW
2904-002015	F107	FILTER-SAW
2904-002016	F103	FILTER-SAW
2904-002017	F207	FILTER-SAW
2904-002018	F201	FILTER-SAW
2904-002019	F203	FILTER-SAW
2904-002020	F105	FILTER-SAW
2904-002024	F106	FILTER-SAW
2909-001285	F302	FILTER-LC

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

SEC CODE	Design LOC	Description
2909-001330	F301	FILTER-LC
2910-000088	F205	DUPLEXER-SAW
2910-000108	F300	DUPLEXER-SAW
2910-000137	F202	DUPLEXER-SAW
2910-000156	F206	DUPLEXER-SAW
2911-000165	U300	DUPLEXER-FEM
2911-000168	U301	DUPLEXER-FEM
2911-000180	F102	DUPLEXER-FEM
3301-001120	L1103,L807	BEAD-SMD
3301-001534	L1400,L1401	BEAD-SMD
3301-001659	L805	BEAD-SMD
3301-001762	L203	BEAD-SMD
3301-001787	L904,L905	BEAD-SMD
3301-001895	L300,L301,L302,L303	BEAD-SMD
3301-001901	L1200	BEAD-SMD
3301-001912	L119	BEAD-SMD
3301-001917	L1201	BEAD-SMD
3301-001946	L601	BEAD-SMD
3301-001986	L201	BEAD-SMD
3301-002037	L1102	BEAD-SMD
3301-002064	L1300	BEAD-SMD
3301-002065	L900,L901,L902,L903	BEAD-SMD
3301-002074	L200,L202,L800	BEAD-SMD
3705-001448	CN300	CONNECTOR-COAXIAL
3705-001731	RFS100,RFS101	CONNECTOR-COAXIAL
3708-002162	HDC1300	CONNECTOR-COAXIAL
3708-002194	SLC1000	CONNECTOR-FPC/FFC/PIC
3708-002781	SLC1200	CONNECTOR-FPC/FFC/PIC
3711-006615	HDC1001,HDC1500	HEADER-BOARD TO BOARD
3711-006615	HDC1501	HEADER-BOARD TO BOARD
3711-006865	HDC1100	HEADER-BOARD TO BOARD
3711-006919	HDC1301	HEADER-BOARD TO BOARD
3711-007467	HDC1400	HEADER-BOARD TO BOARD

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

SEC CODE	Design LOC	Description
3711-007494	CON1000	CONNECTOR-HEADER
3711-007612	HDC900	HEADER-BOARD TO BOARD
3712-001348	ANT100,ANT101,ANT102	CONNECTOR-TERMINAL
3712-001348	ANT103,ANT107,ANT111	CONNECTOR-TERMINAL
3712-001348	ANT112	CONNECTOR-TERMINAL
3712-001375	ANT106	CONNECTOR-TERMINAL
GH98-21444A	SC100	ASSY COVER-SHIELD CAN D

Please consult the GSPN website (Samsung Portal) for the most recent version of the product's part list.

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

6. Level 6 Repair

6-1. S/W installation

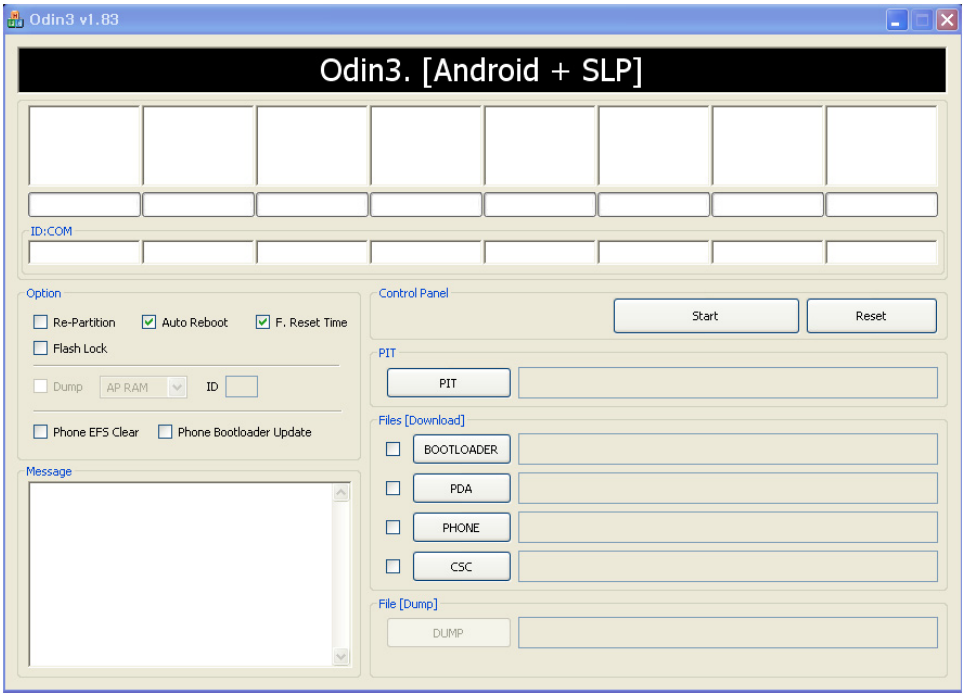
6-1-1. Required items in order to install S/W

- Installation program: Downloader Program (**Odin3 v1.86exe**)
- GT-P7320 Mobile Phone
- Data Link Cable (GH39-01440H)
- Mobile device specific S/W: Binary files

❖ **Settings**

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

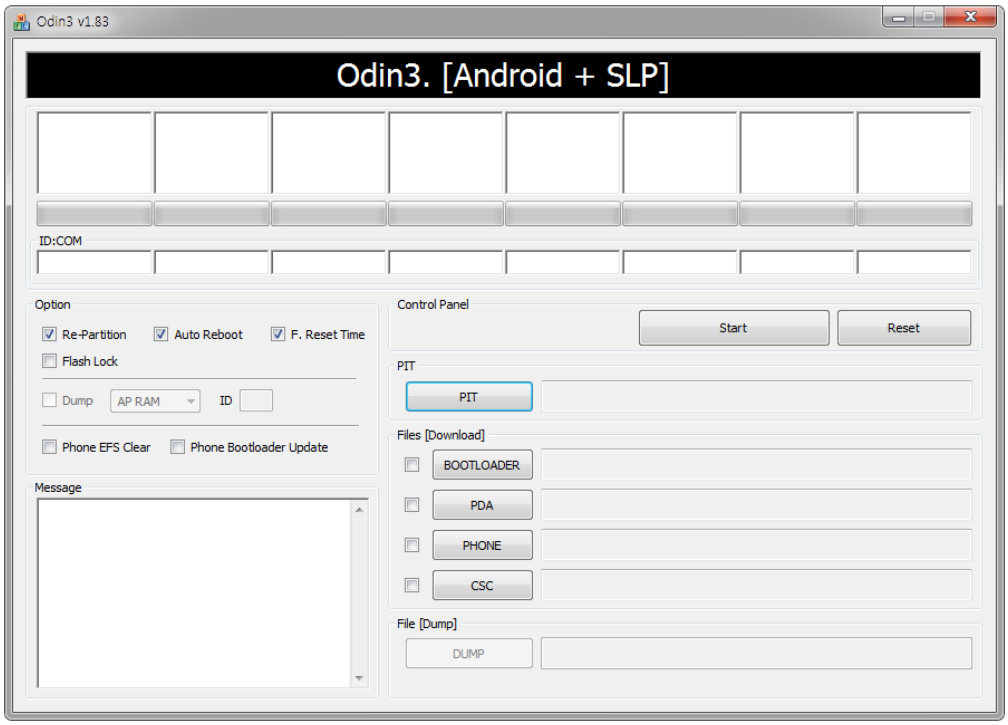
■ Open up the S/W Installation Program by executing the **"Odin3 v1.86exe"**



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

1. Option Selection

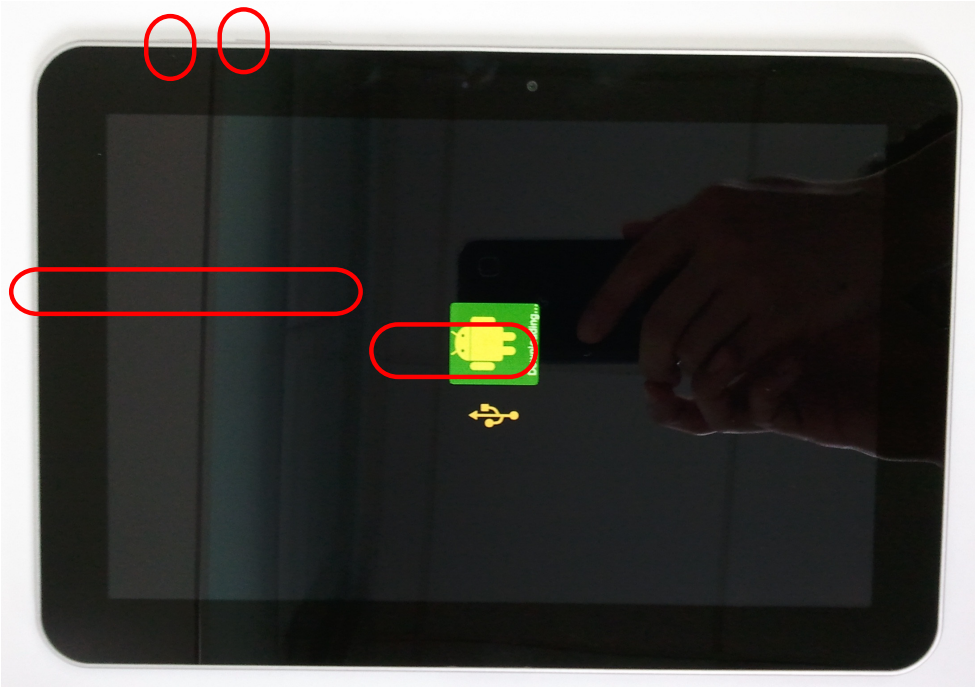
- Check Re-Partition, Auto Reboot and F. Reset Time, then select PIT File



2. Enter Device into Download Mode

- Press down on Volume Down button and power key at same time for 10 seconds

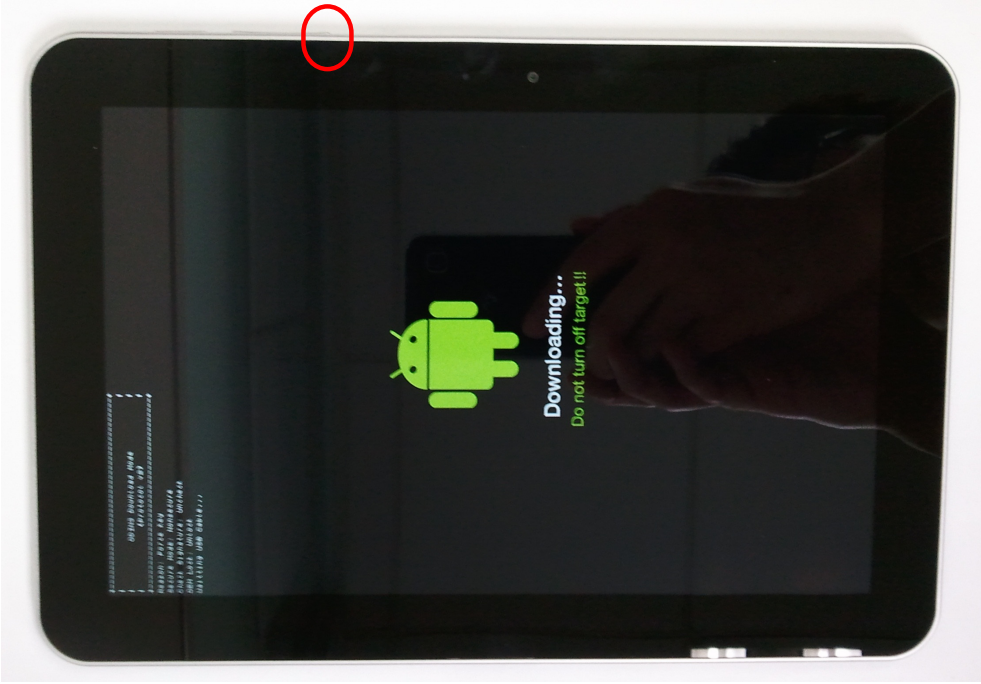
Power key Volume Down Button



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

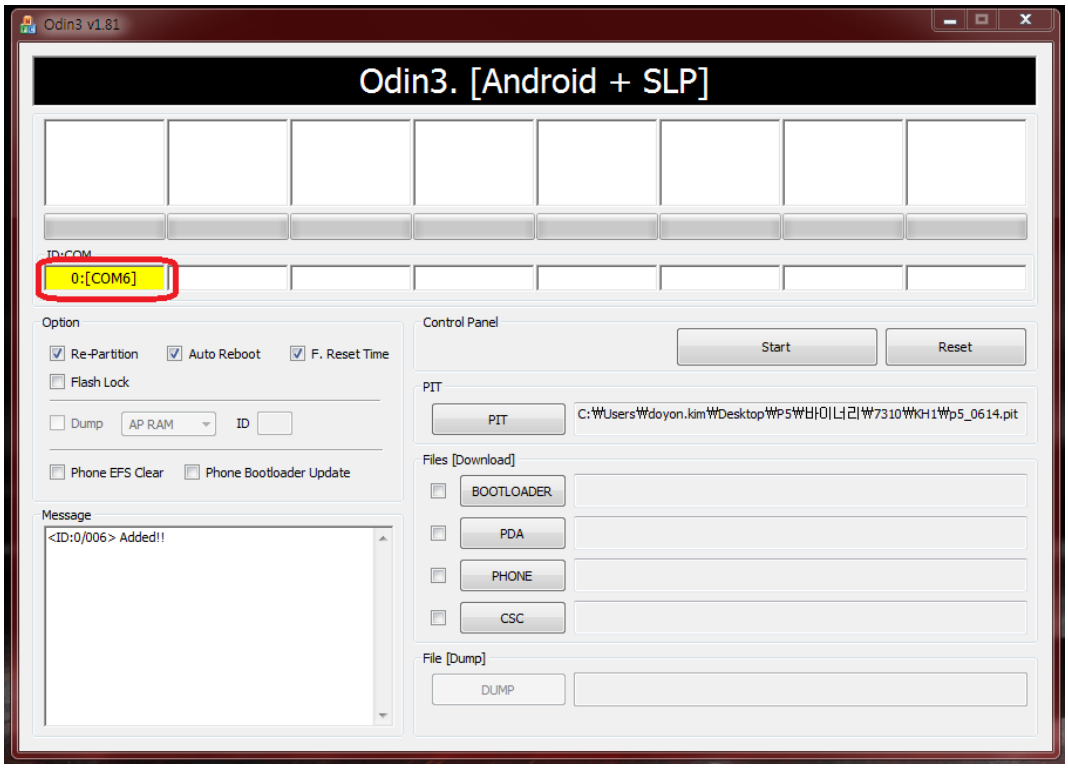
- Press down on Volume Up button to enter device into download mode

Volume Up Button

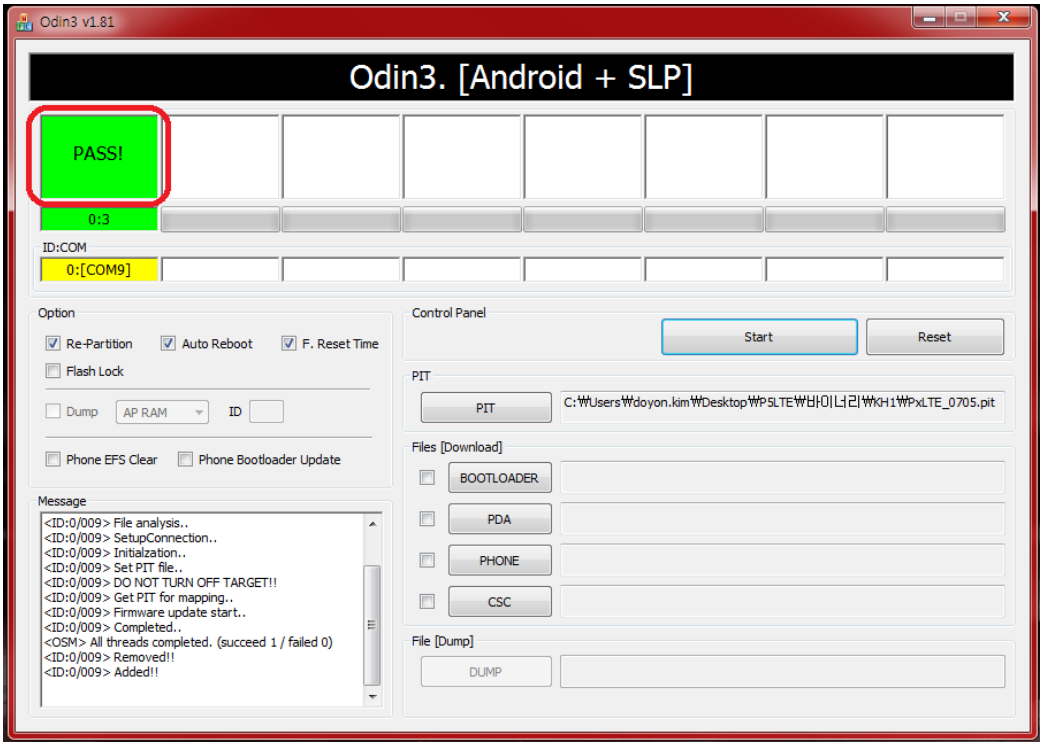


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

3. Connect the Device to PC via Data Cable.
Make sure ID:COM box highlighted yellow that the device is connected to the PC.

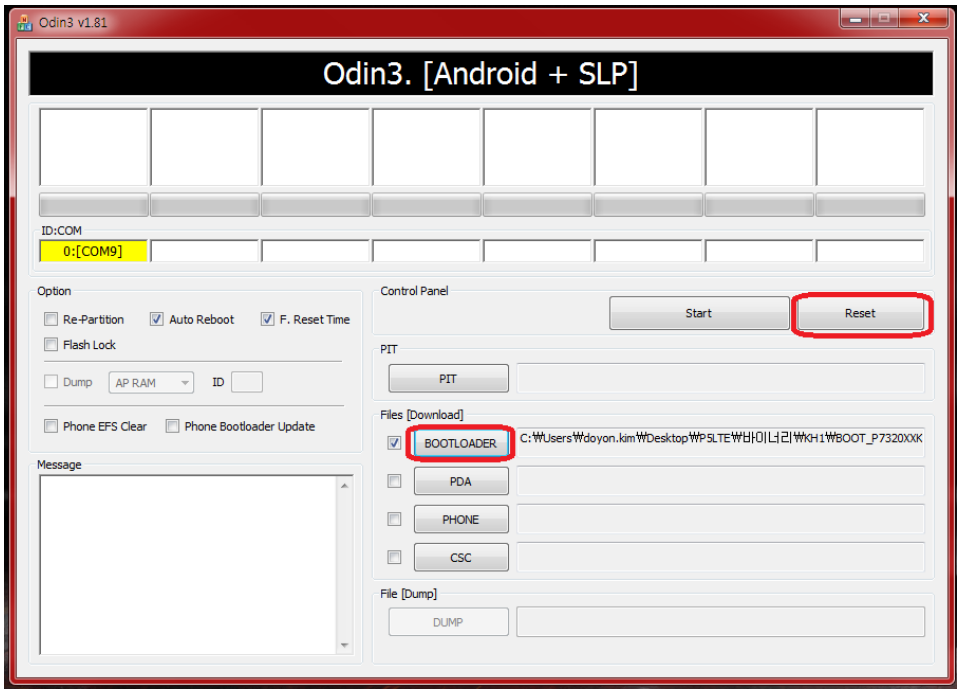


4. Start Downloading PIT file by clicking Start Button. Then wait for "Pass" to be appear on the screen.



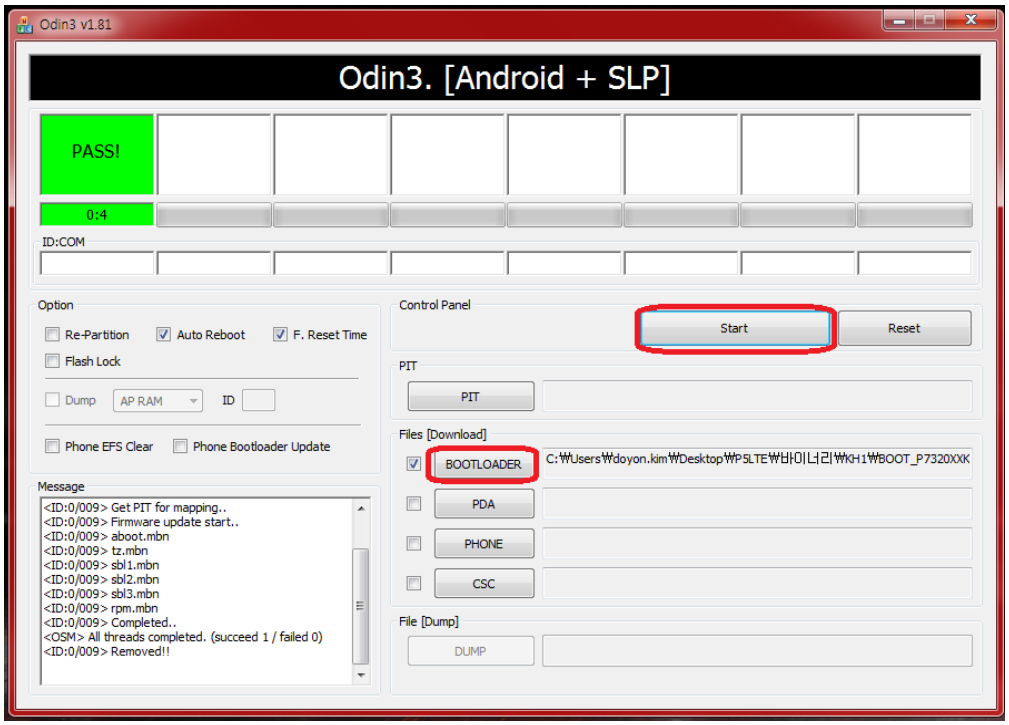
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

5. Click on Reset button, then unselect Re-Partition box. Then select BOOTLOADER Files.



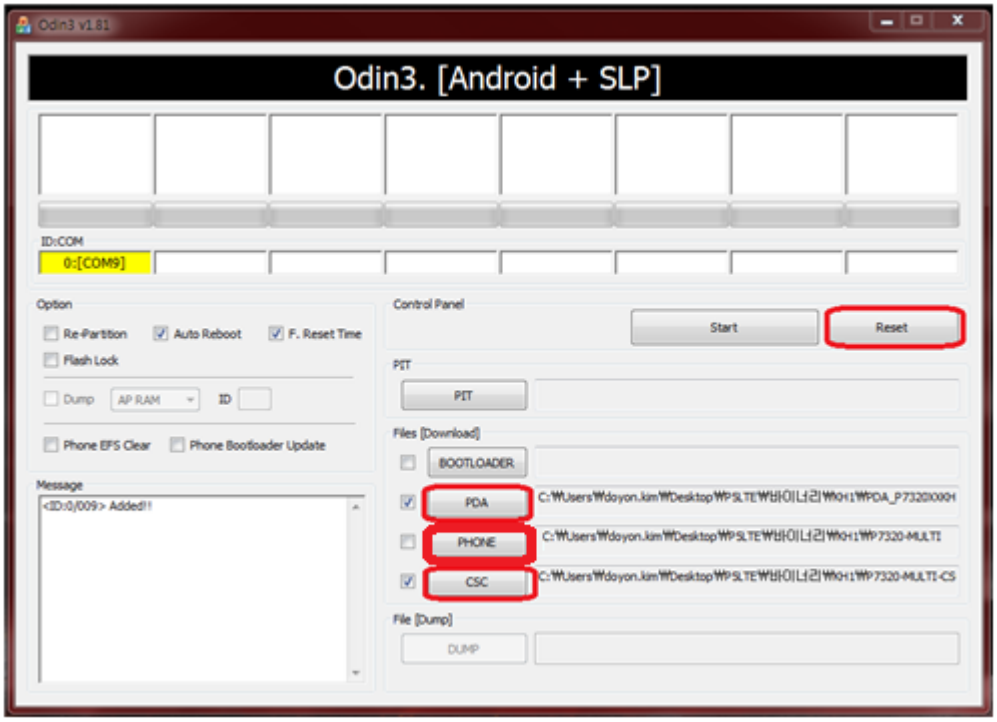
6. Remove the battery, then enter Device into Download Mode again as in step #2. then connect to the PC.

7. Start Downloading BOOTLOADER Files by clicking Start Button. Then wait for "Pass" to be appear on the screen.



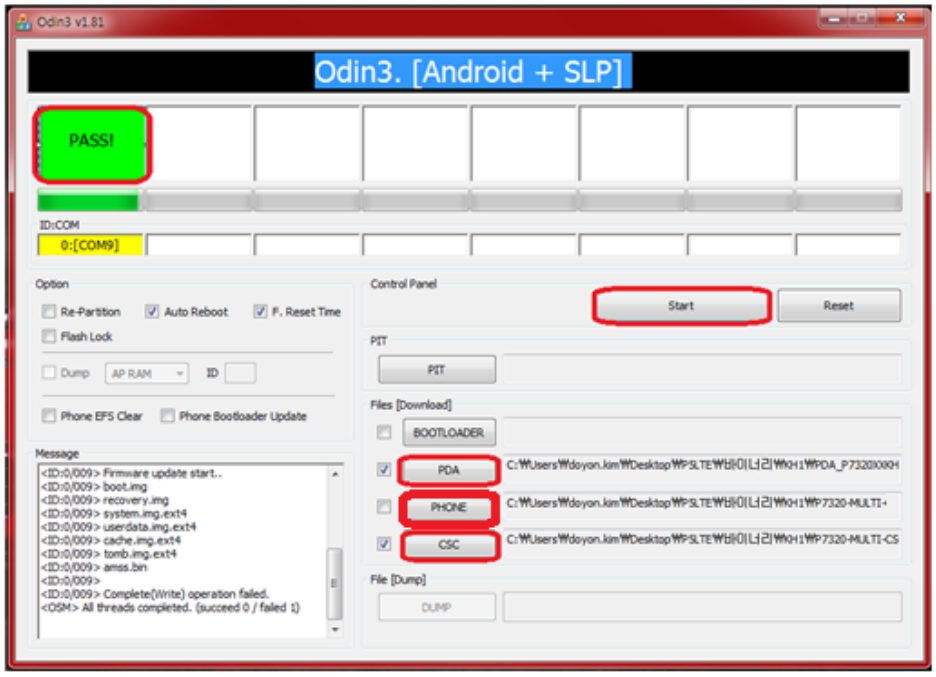
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8. Click on Reset button, then unselect Re-Partition box. Then select PDA and PHONE and CSC Files. (or select only ALL_SGH-I957XX.. file at PDA slot)



9. Remove the battery, then enter Device into Download Mode again as in step #2. then connect to the PC.

10. Start Downloading PDA and PHONE and CSC files by clicking Start Button. Then wait for "Pass" to be appear on the screen.



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

11. Once the device boots up, confirm the downloaded version name and etc. :
***#1234#**

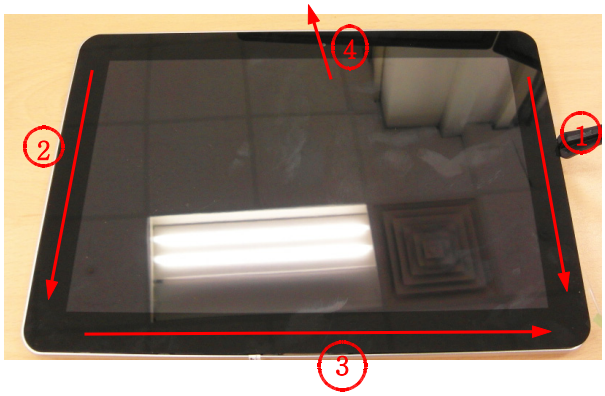
Full Reset :
***2767*3855#**

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

7. Level 2 Repair

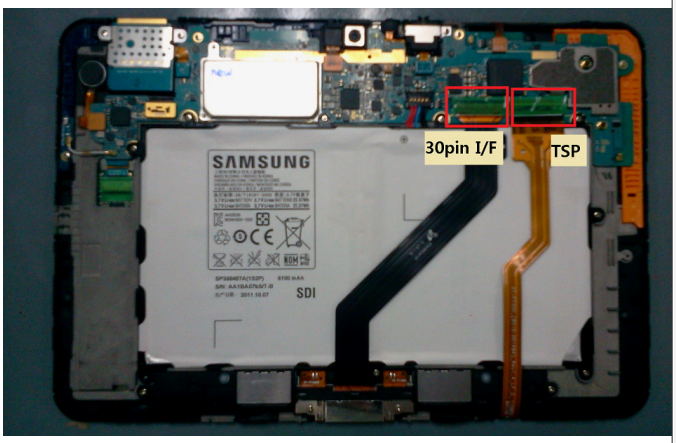
7-1. Disassembly

1 Disengage the rear cover with the front cover by using the hooker



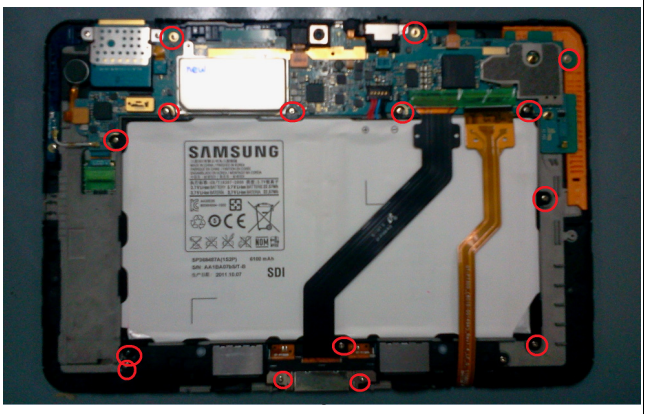
Follow the numbered sequence when you disjoint
Be careful not to scratch cover.

2 Separate the 30 PIN I/F connector, TSP connector from the PBA.



Be careful not to damage the FPCBs

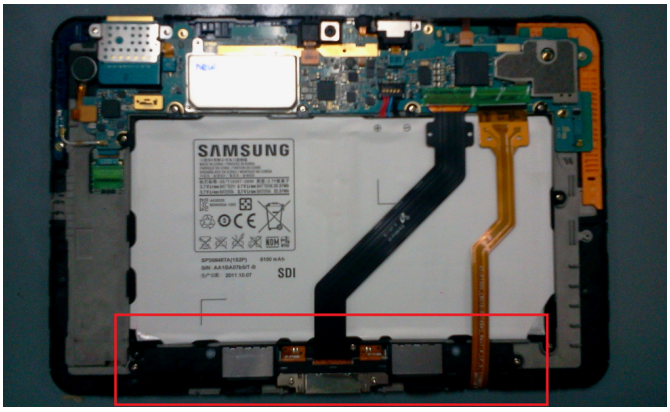
3 Release the screw at 15 points (Size:1.4*2.5) (Torque: 1.1±0.1 kgf.cm)



◆RED:L2.5
(15Point)

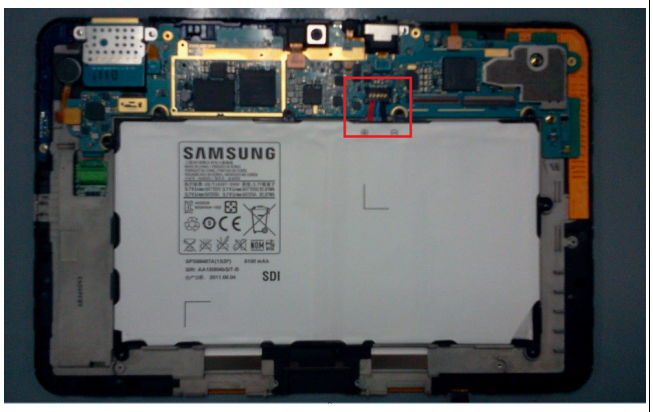
Be careful not to scratch cover

4 Separate the 30 PIN I/F module from the PBA.



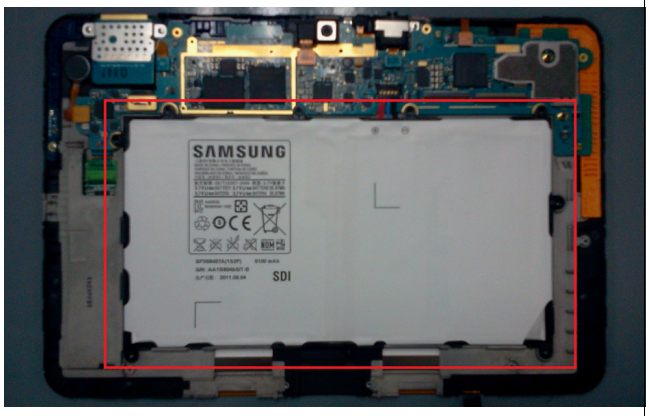
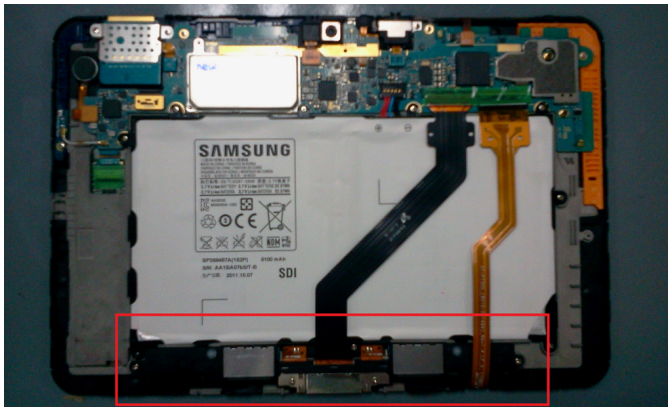
Be careful not to damage the FPCBs

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

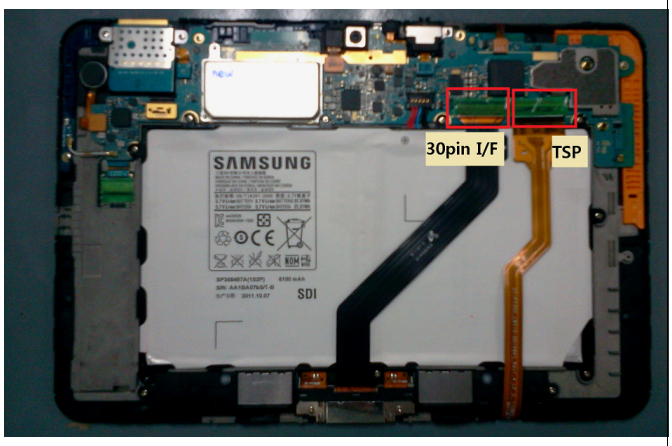
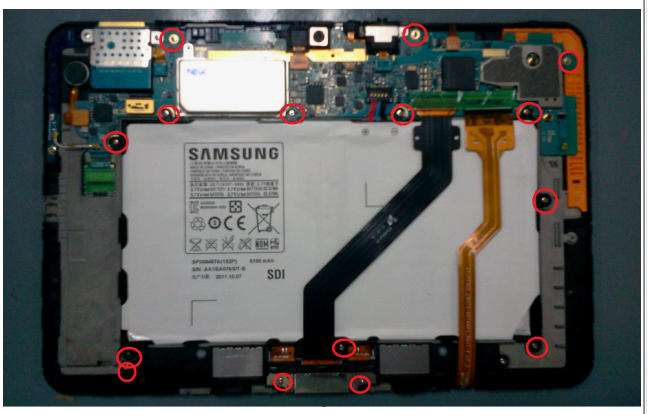
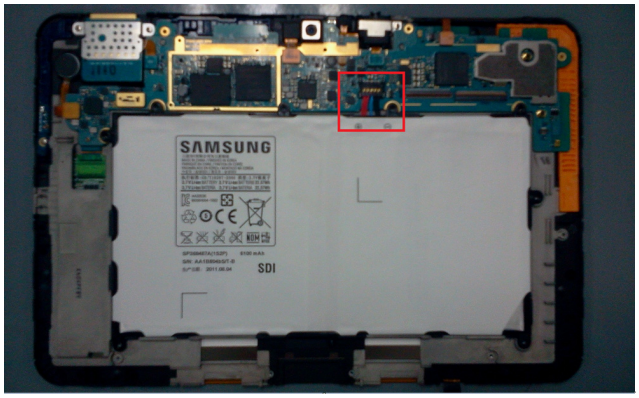
5 Separate the Battery from PBA 	**6** Separate the LCD, Ear jack, Side key, Motor,SIM socket,Coaxial cable Connector from the PBA.
Be careful not to damage the wires	Be careful not to damage the FPCBs
7 Separate the PBA from Ass'y 	
Be careful not to scratch cover	

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

7-2. Assembly

1 Insert the PBA in the hooker 	2 Attach the LCD, Ear jack, Side key, Motor,SIM socket,Coaxial cable Connector from the PBA.
Be careful not to scratch cover	Be careful not to damage the FPCBs
3 Attach the battery to pba ass'y.  	4 Attach the 30 PIN I/F module from the PBA. 
Be careful not to damage the wires	Be careful not to damage the wires

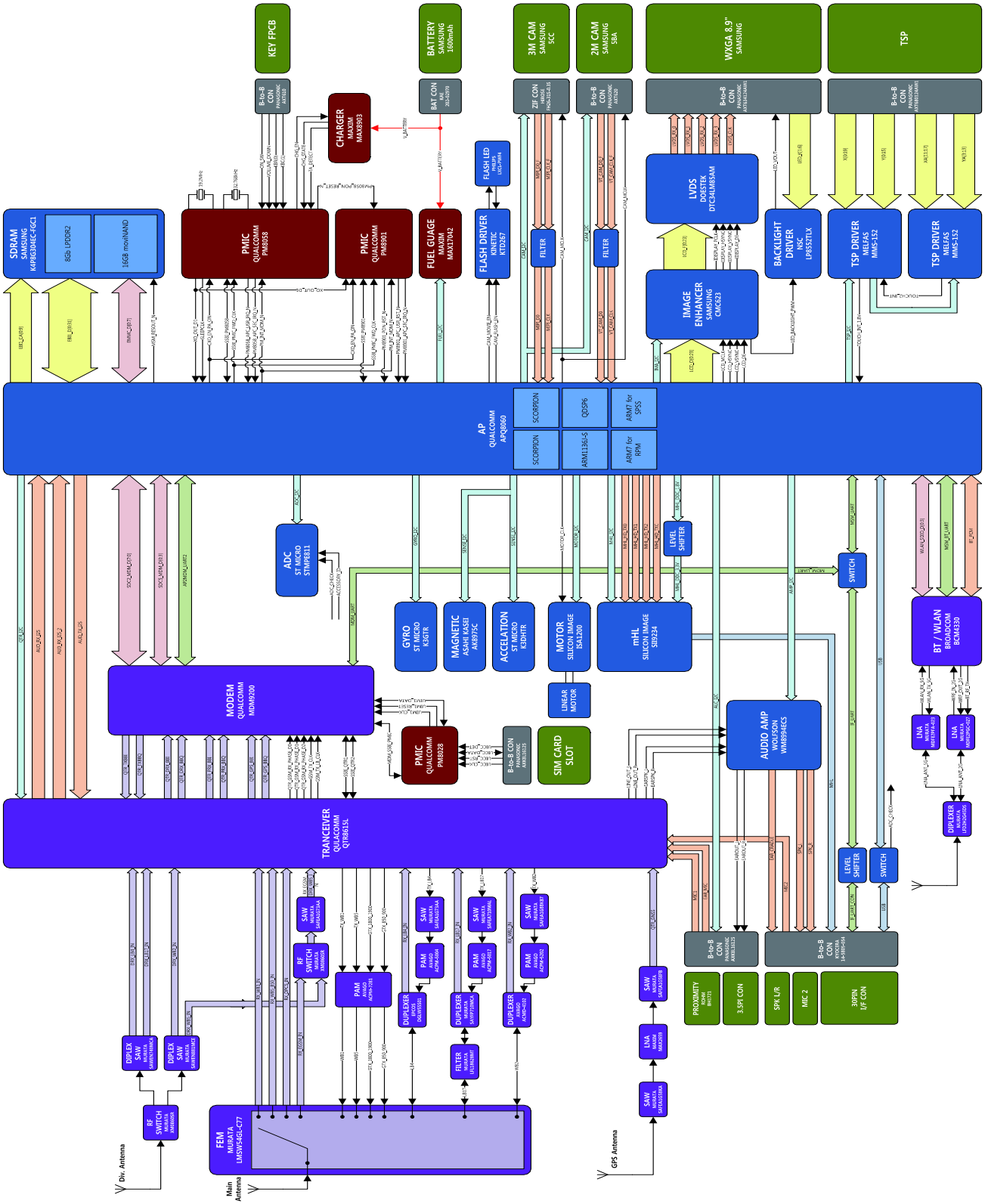
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

5 Insert the 30 PIN I/F connector, TSP connector from the PBA. 	**6** Screws at 15 points (Size:1.4*2.5) (Torque: 1.1±0.1 kgf.cm) 
Be careful not to damage the FPCBs	Be careful not to scratch cover screw:1.4*2.0, 1.4*2.5 (Torque 1.1 ± 0.1, '+' type)
7 Assembly battery connector. 	**8** Joint the Rear and the Front.
Be careful not to damage the wires	Follow the order

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8. Level 3 Repair

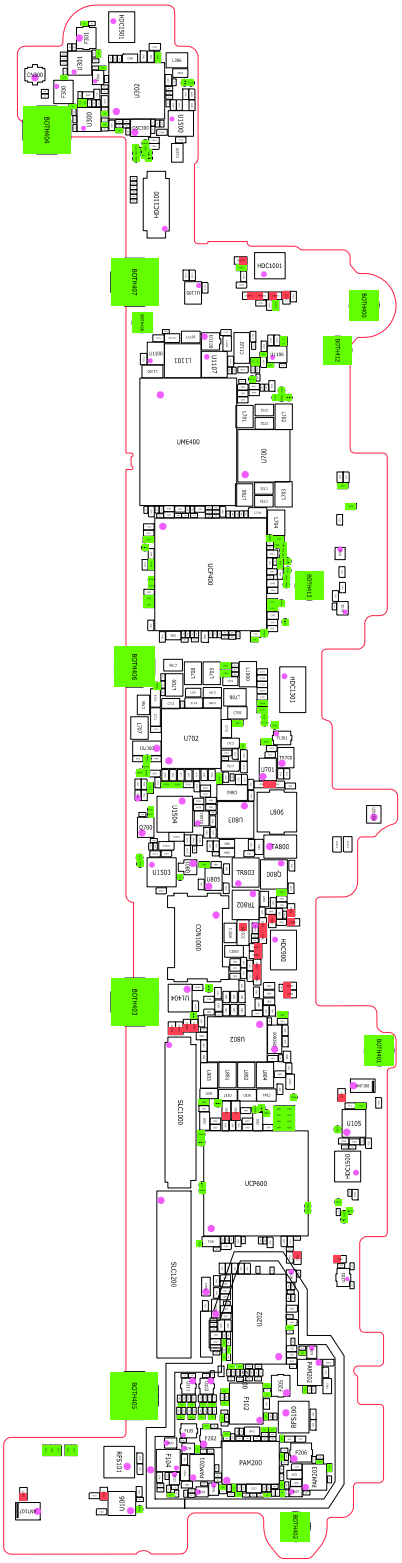
8-1. Block Diagram



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

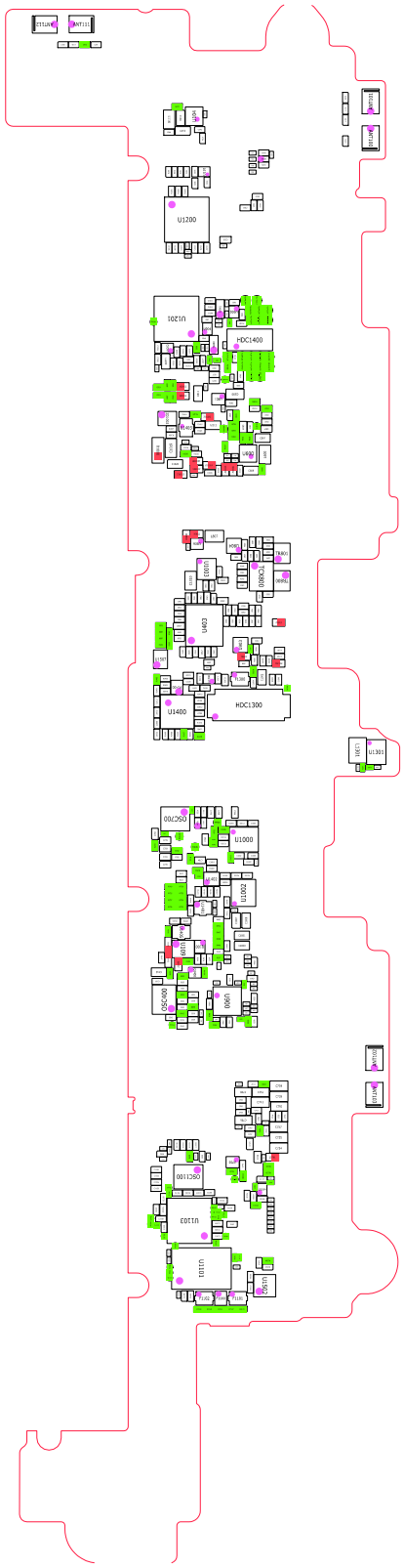
8-2. PCB Diagrams

8-2-1. Top



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

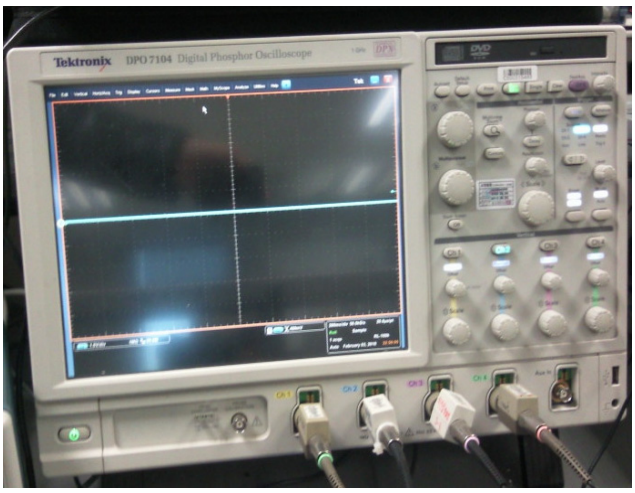
8-2-2. Bottom



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3. Flow Chart of Troubleshooting

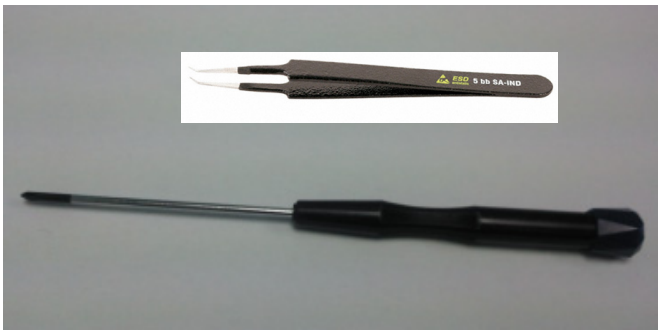
Equipments



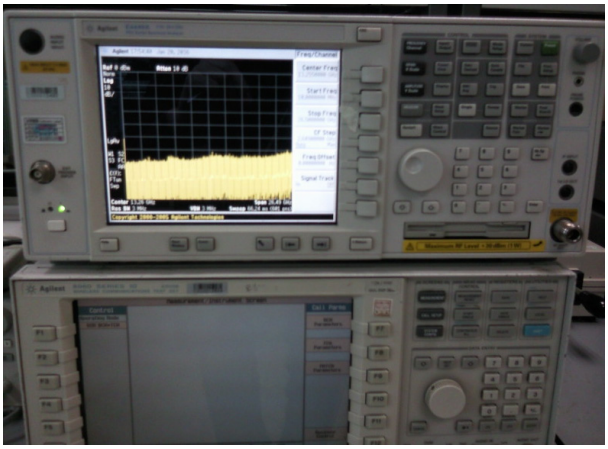
↑ Oscilloscope

↑ Digital Multimeter

↑ Power Supply



↑ + driver, ESD Safe Tweezer

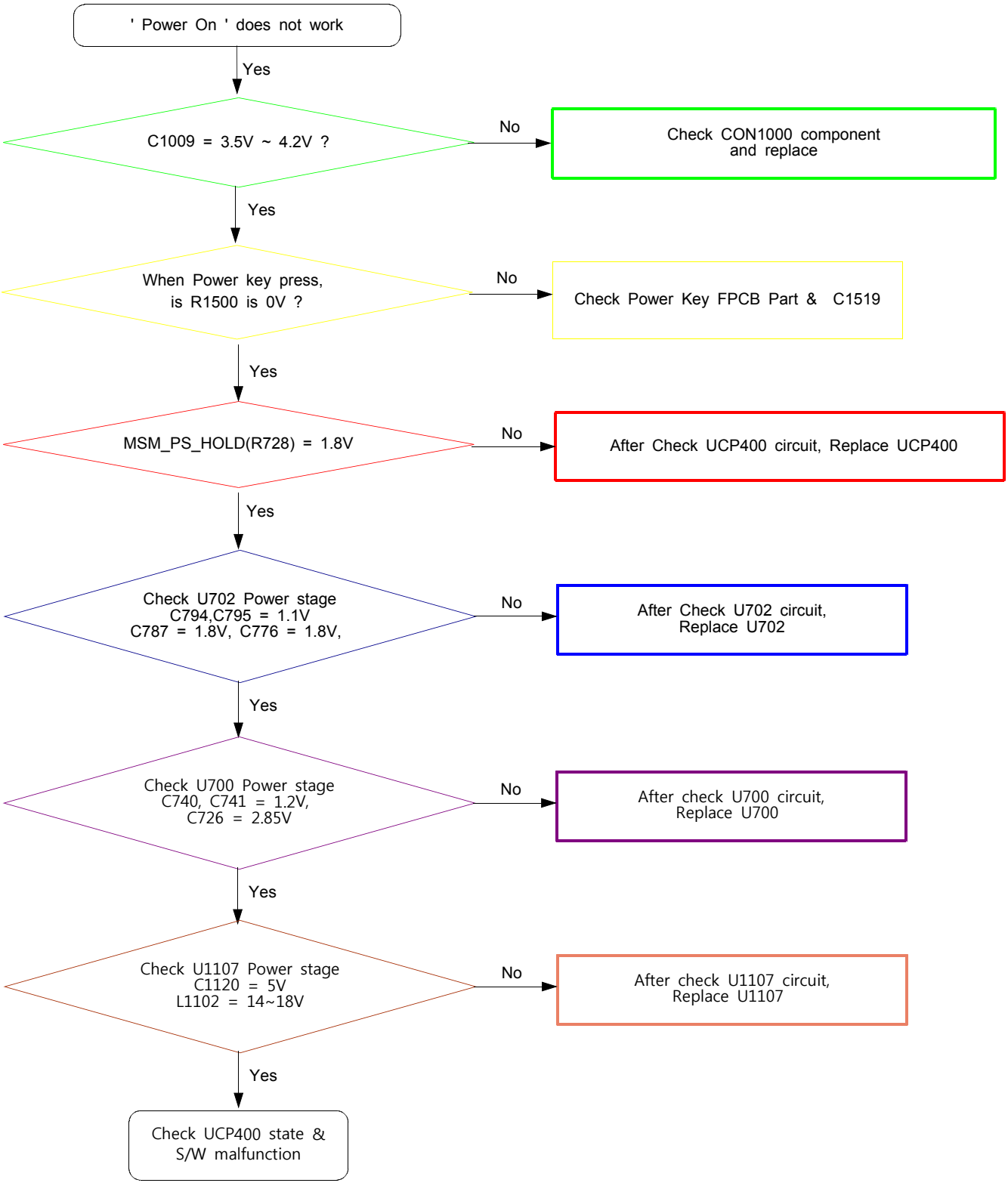


↑ 8960 & Spectrum Analyzer

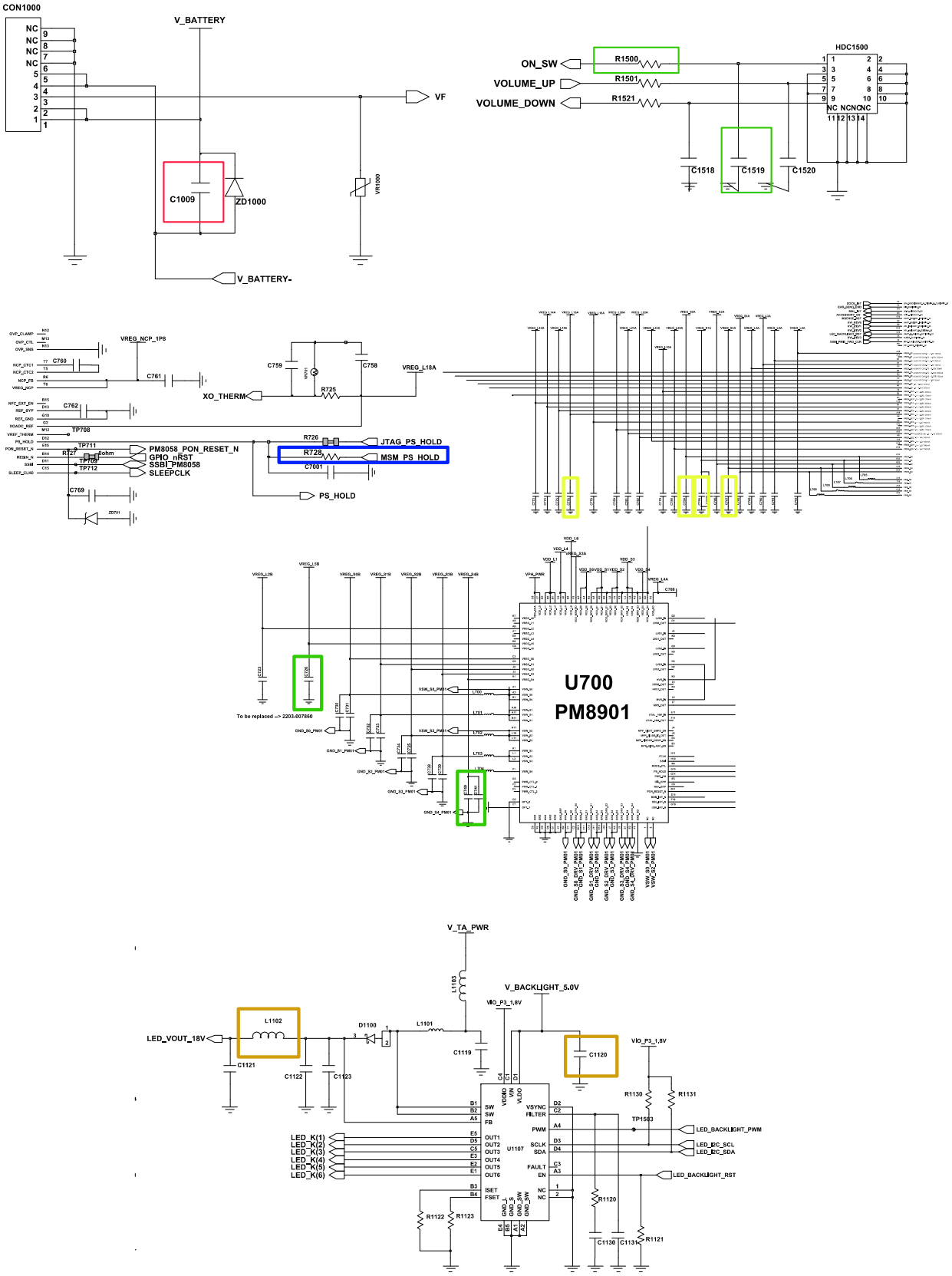
↑ Soldering iron

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-1. Power On - AP Power

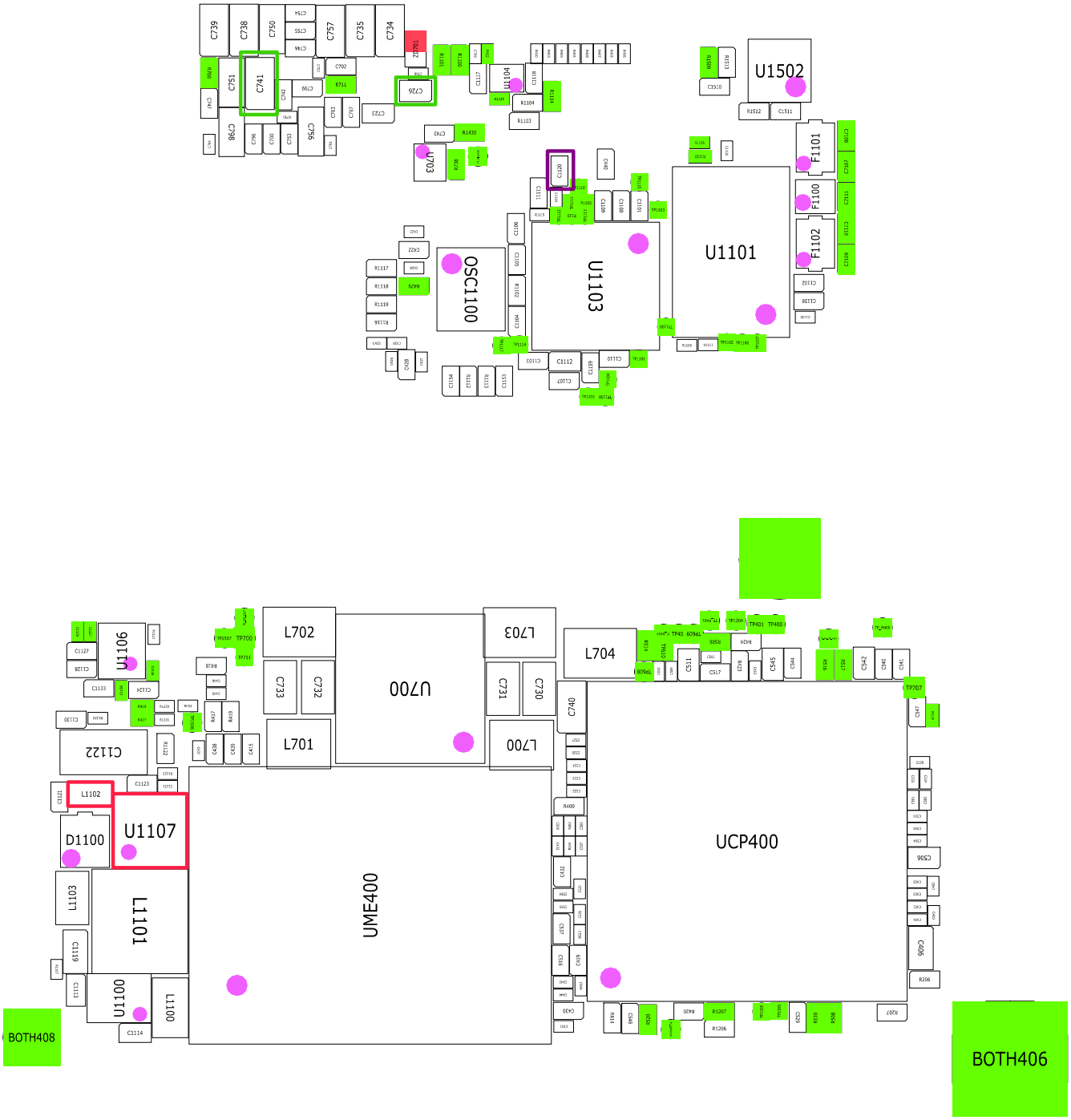

' Power On ' does not work
Yes
C1009 = 3.5V ~ 4.2V ?
No
Check CON1000 component and replace
Yes
When Power key press, is R1500 is 0V ?
No
Check Power Key FPCB Part & C1519
Yes
MSM_PS_HOLD(R728) = 1.8V
No
After Check UCP400 circuit, Replace UCP400
Yes
Check U702 Power stage C794,C795 = 1.1V C787 = 1.8V, C776 = 1.8V,
No
After Check U702 circuit, Replace U702
Yes
Check U700 Power stage C740, C741 = 1.2V, C726 = 2.85V
No
After check U700 circuit, Replace U700
Yes
Check U1107 Power stage C1120 = 5V L1102 = 14~18V
No
After check U1107 circuit, Replace U1107
Yes
Check UCP400 state & S/W malfunction

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



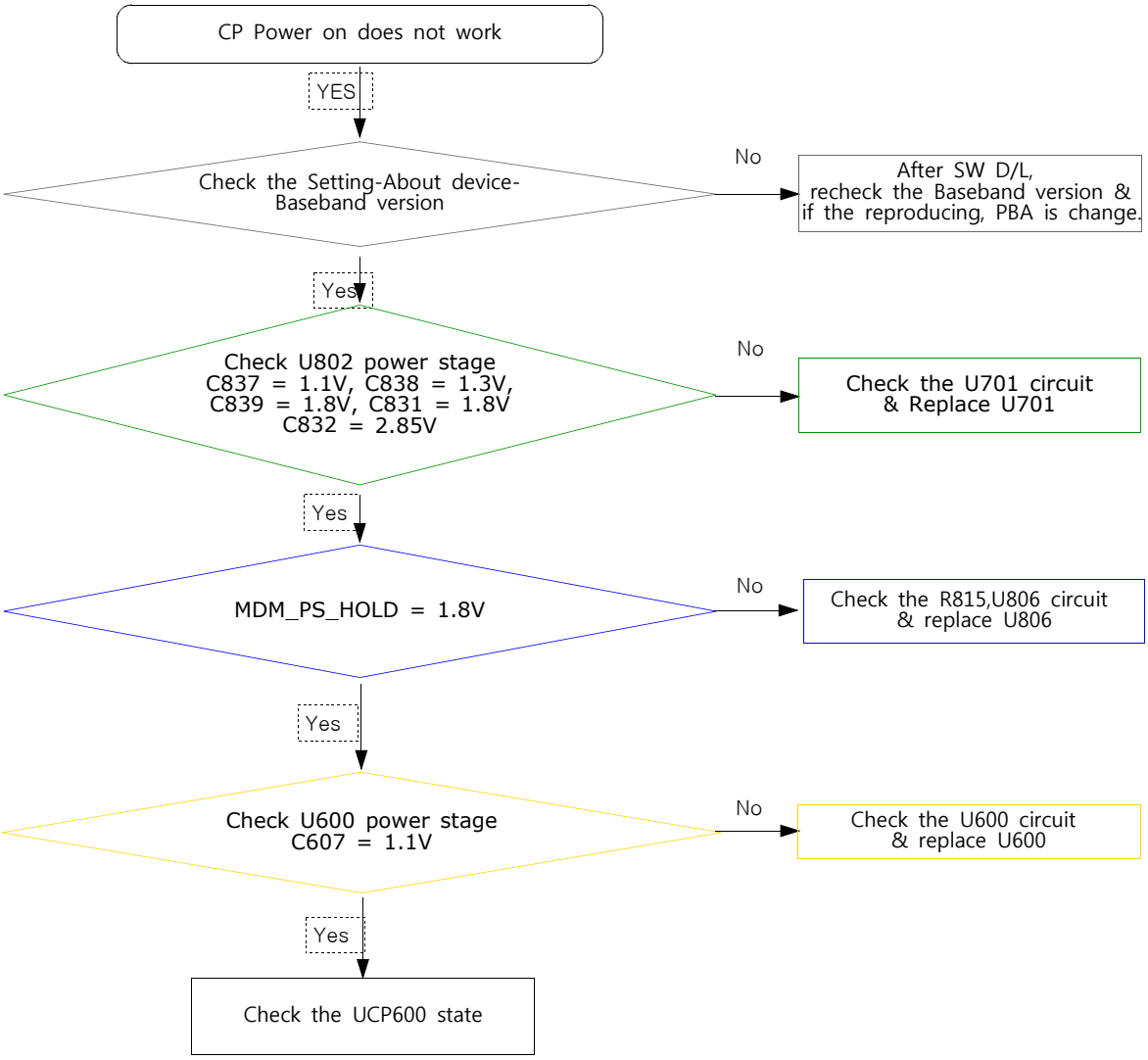
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

BOTH401
BOTH406
HDC1301
CON1000
U702
U701
U1504
U1503
U1000
U1002
U1401
U1402
U1405
OSC700
U700
U1107
UME400
L1101
L1100
U1100
D1100
C1122
L702
L703
L701
L700
U1106
TR803
TR802
U805
Q801
U1404
ZD1000
C1009
C1003
ANT106
U105
HDC1500
F1301
TR700
L806
TA800
Q800
U803
C860
L1000
L706
L705
L708
L709
L707
C795
C794
C786
OSC701
Q700
U1001
U1501
C1502
C1503
C1504
C1505
C1506
C1507
C1508
C1509
C1510
C1511
C1512
C1513
C1514
C1515
C1516
C1517
C1518
C1519
C1520
C1521
C1522
C1523
C1524
C1525
C1526
C1527
C1528
C1529
C1530
C1531
C1532
C1533
C1534
C1535
C1536
C1537
C1538
C1539
C1540
C1541

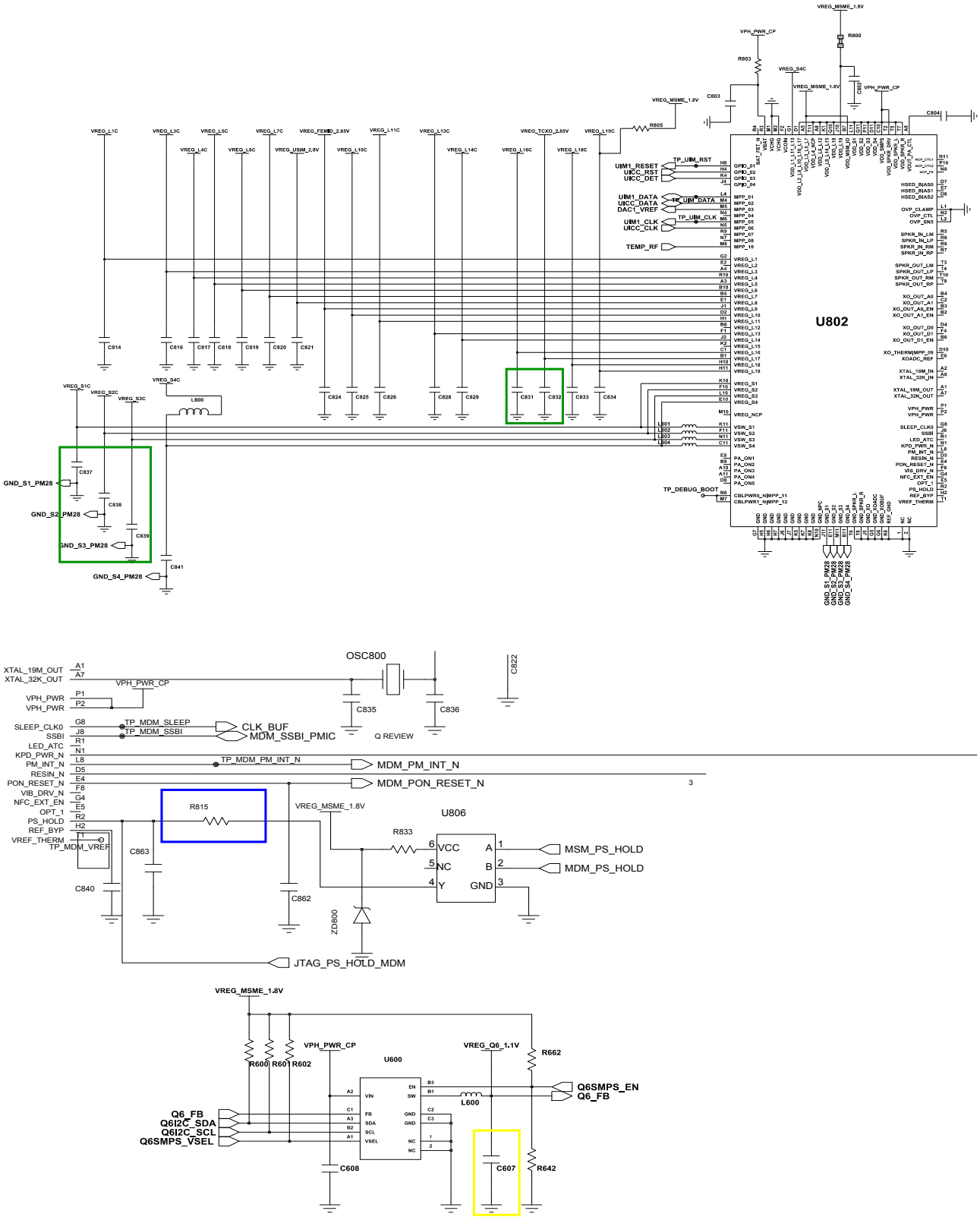


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

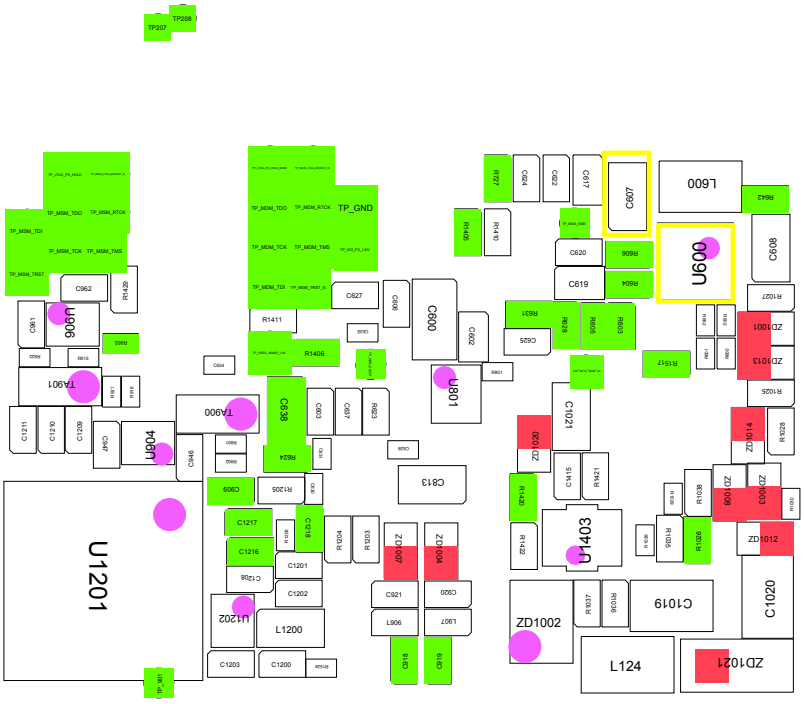
8-3-2. Power on - CP Power


CP Power on does not work
YES
Check the Setting-About device-Baseband version
No
After SW D/L, recheck the Baseband version & if the reproducing, PBA is change.
Yes
Check U802 power stage C837 = 1.1V, C838 = 1.3V, C839 = 1.8V, C831 = 1.8V C832 = 2.85V
No
Check the U701 circuit & Replace U701
Yes
MDM_PS_HOLD = 1.8V
No
Check the R815,U806 circuit & replace U806
Yes
Check U600 power stage C607 = 1.1V
No
Check the U600 circuit & replace U600
Yes
Check the UCP600 state

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

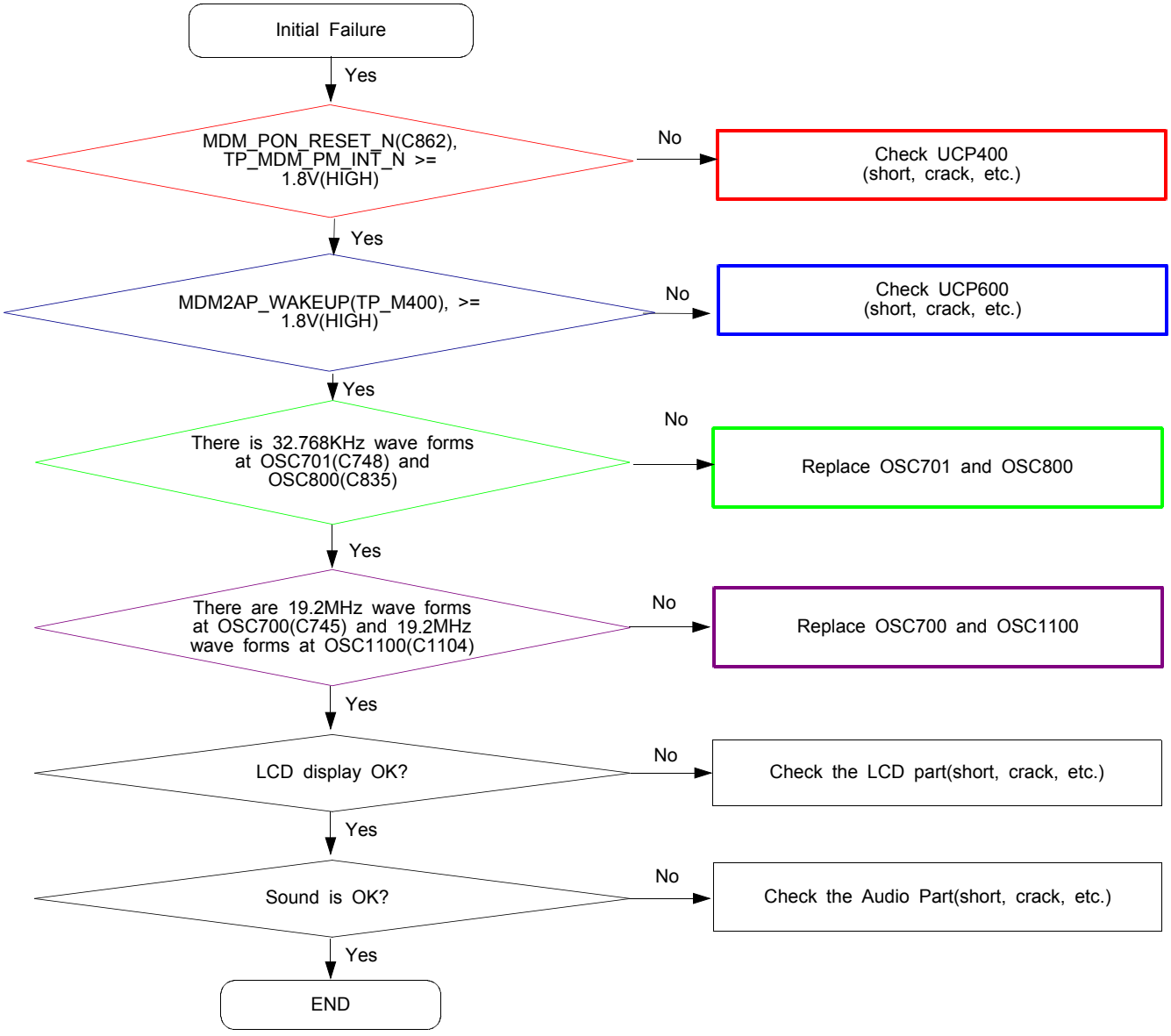


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

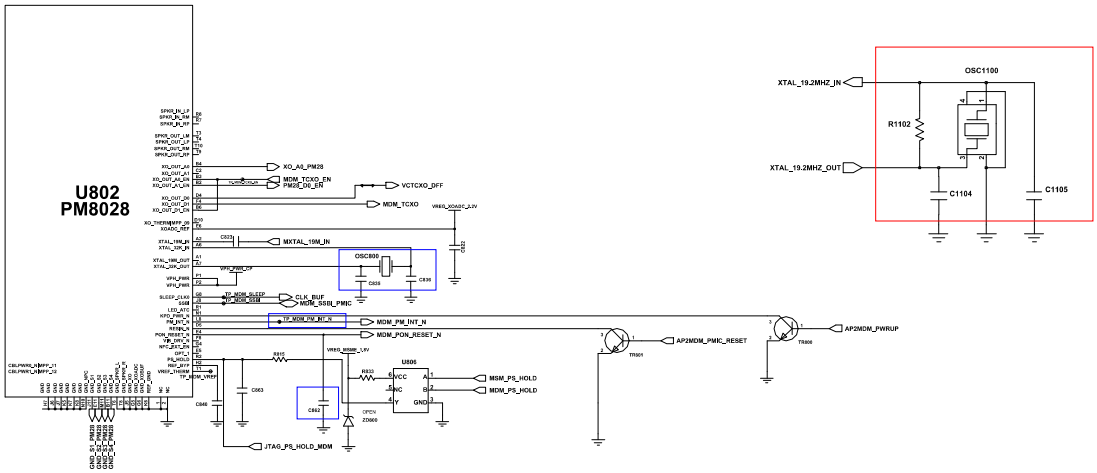


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

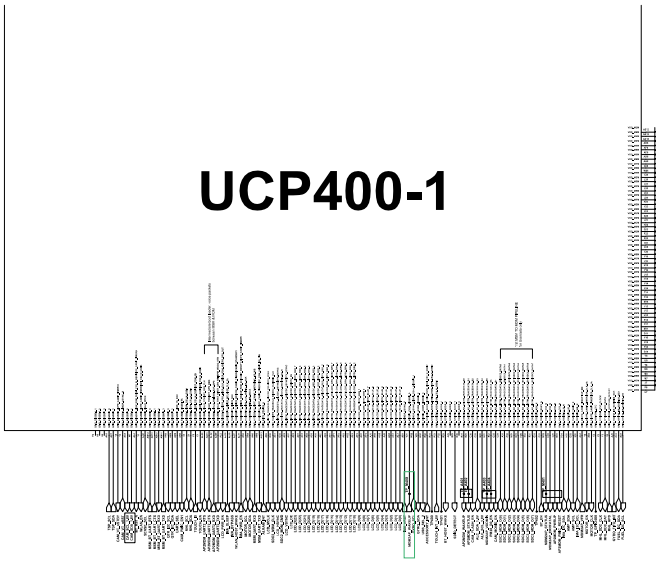
8-3-3. Initial

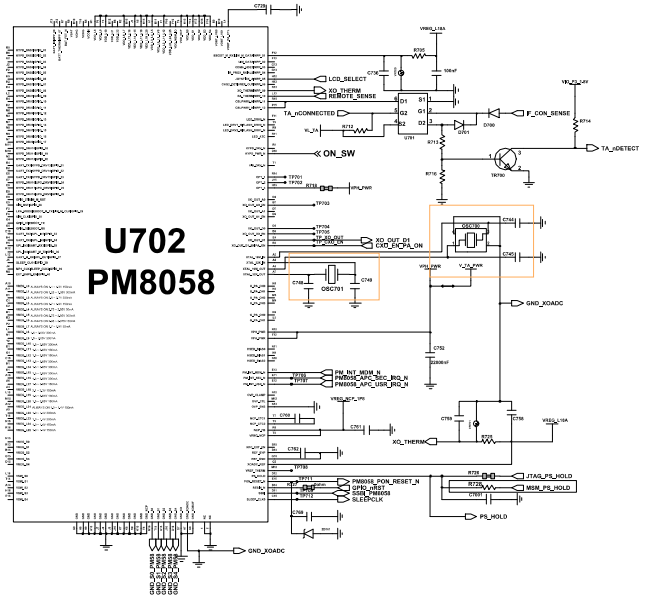


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

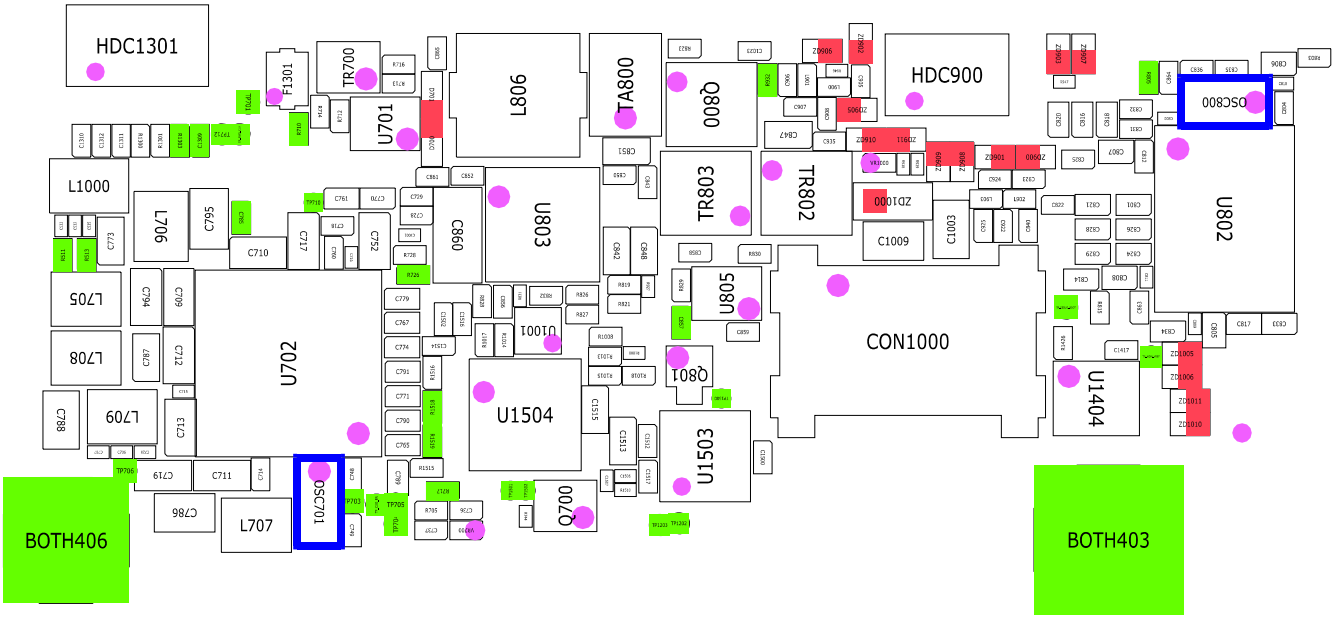


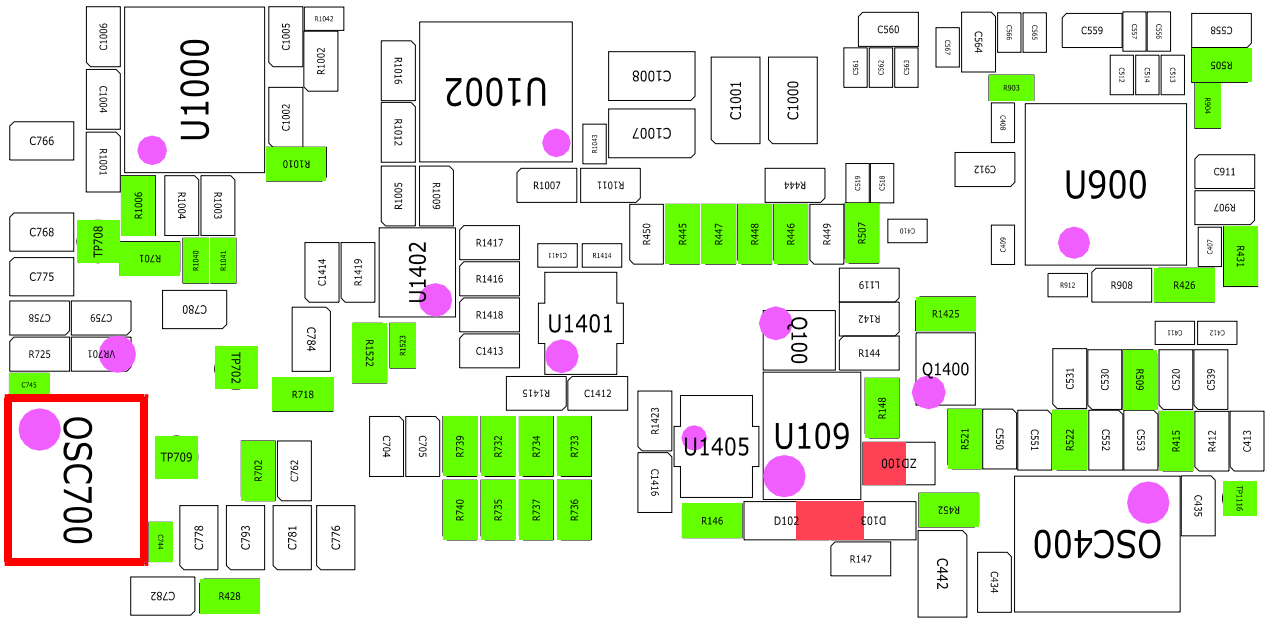
UCP400-1





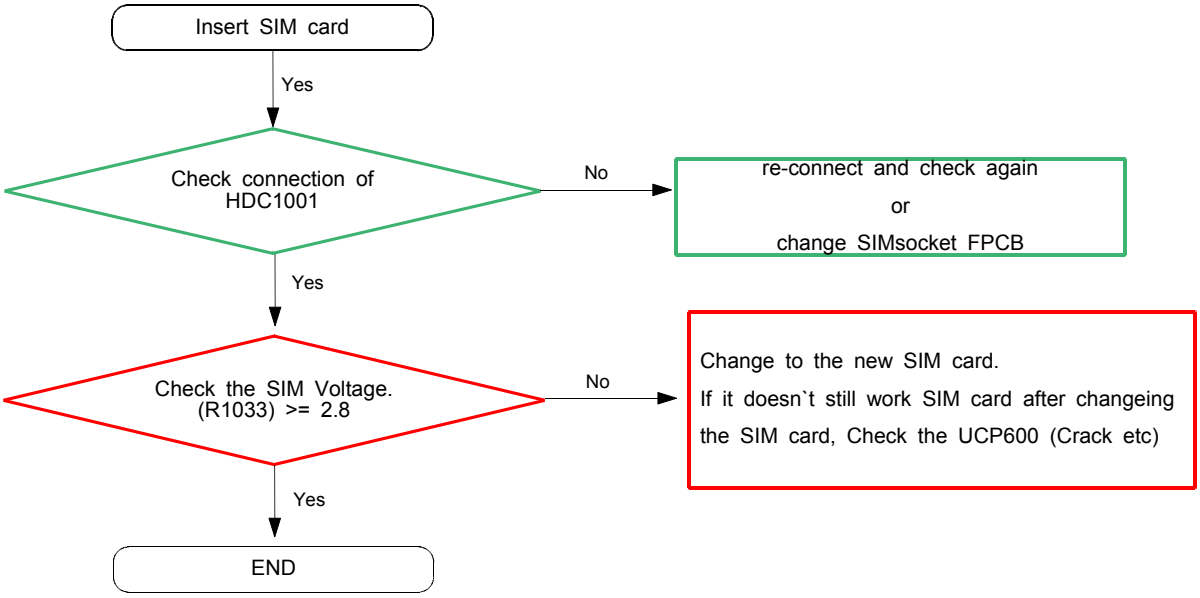
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

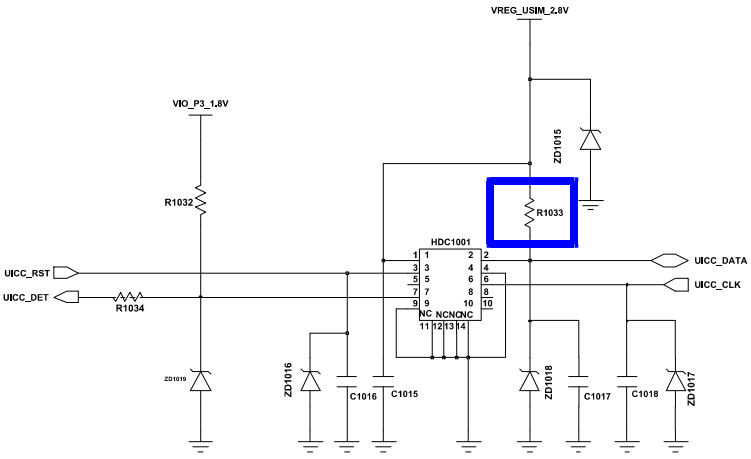


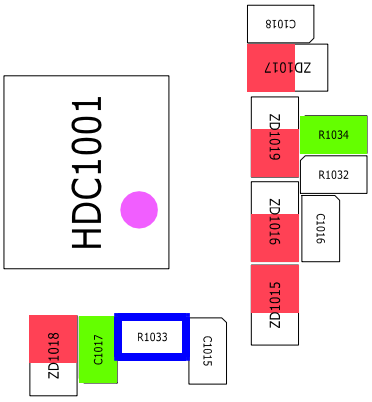


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-4. Sim Part



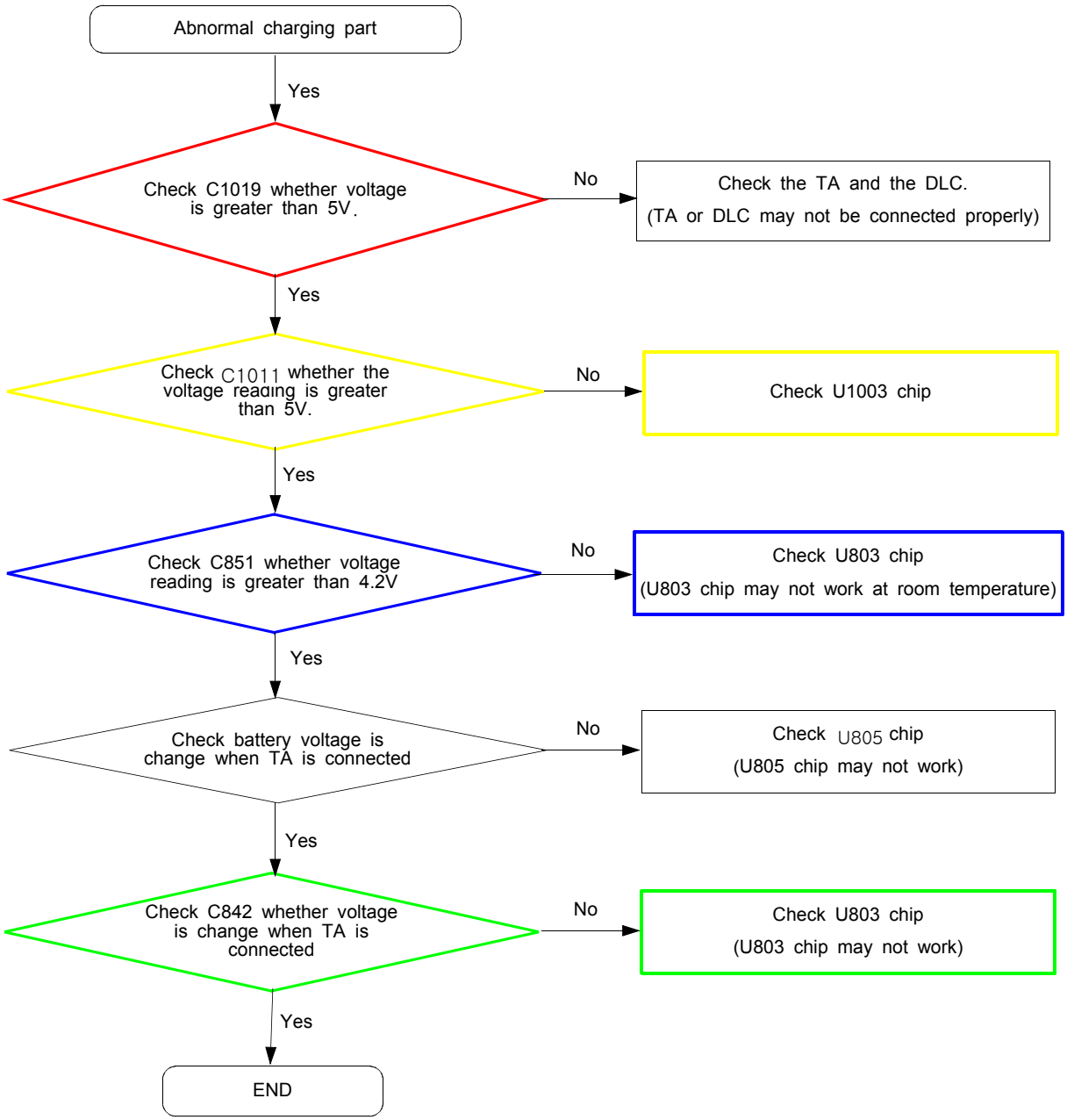




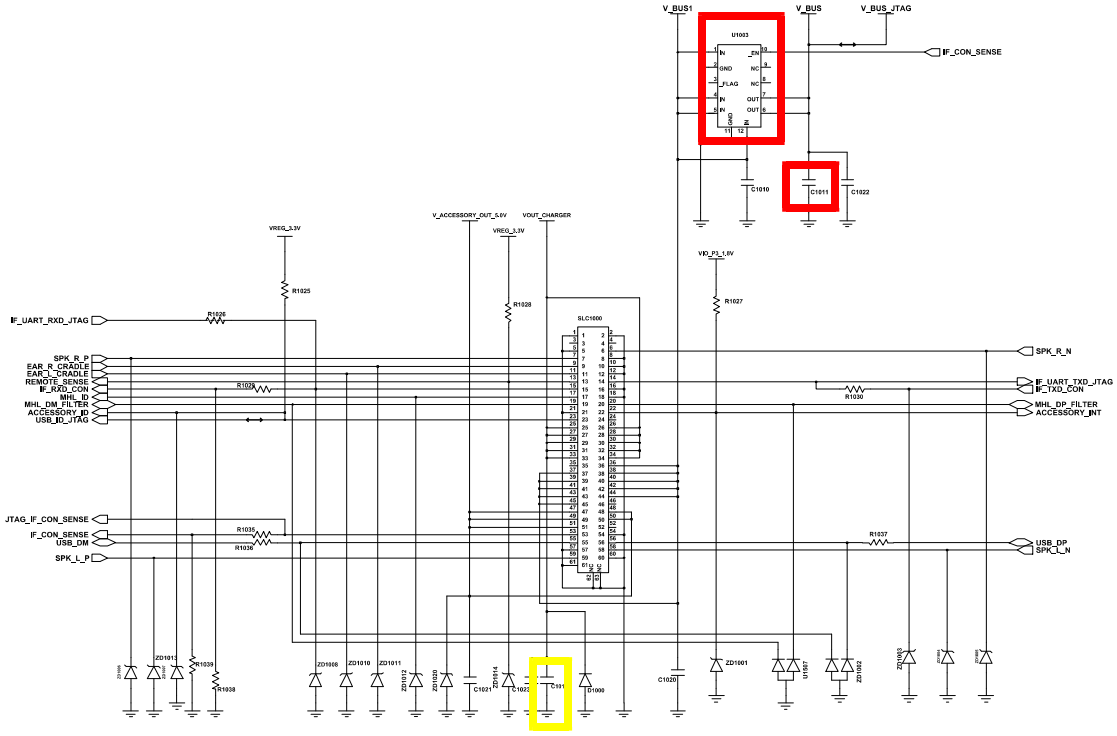
<SIM Connector>

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

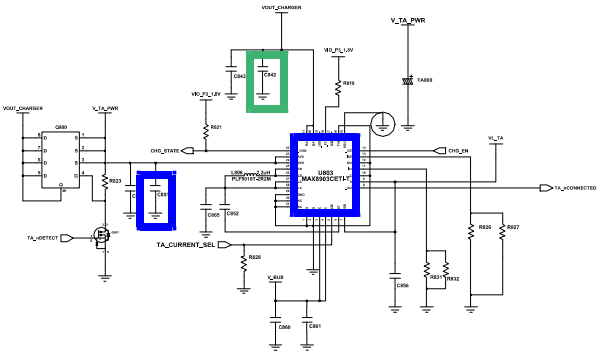
8-3-5. Charging Part



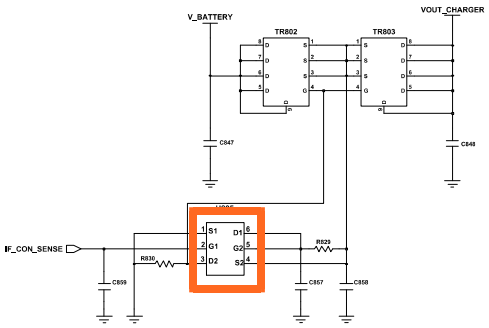
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



<61pin <- 30pin I/F>

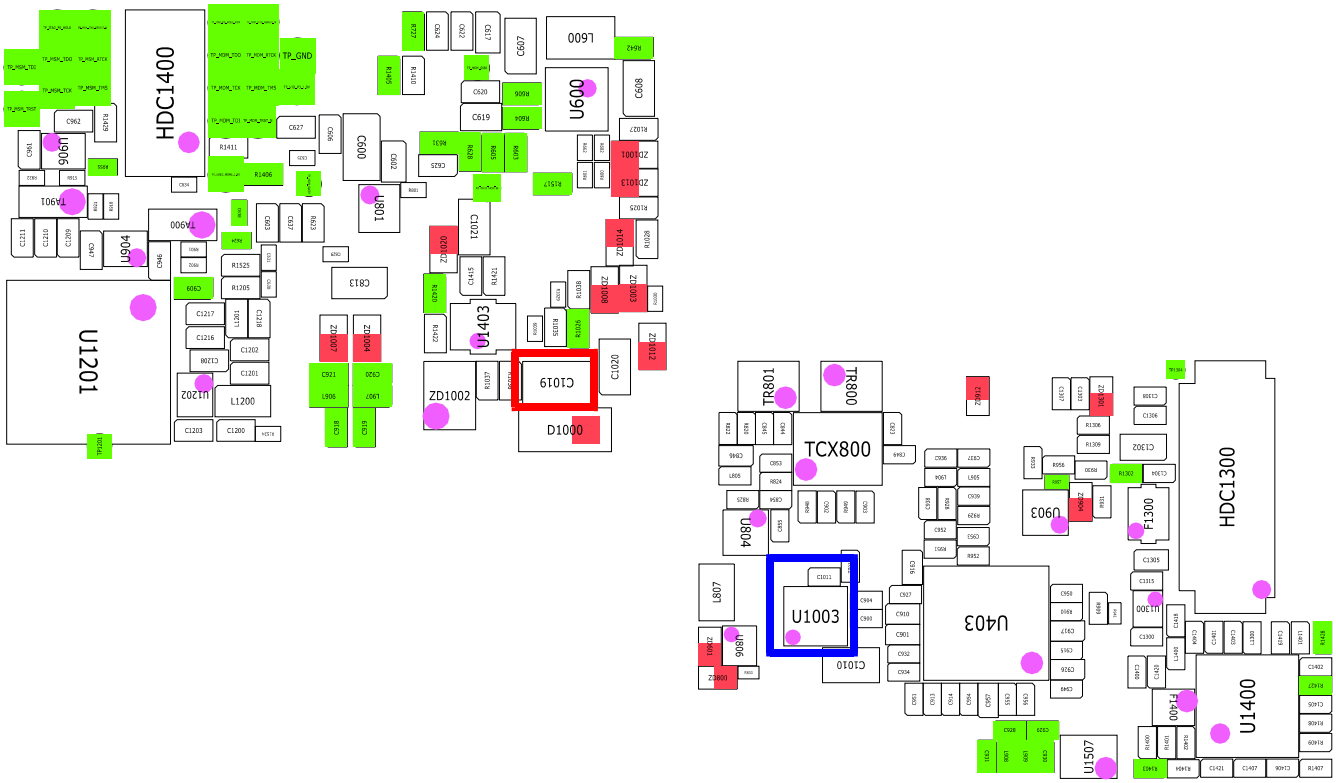


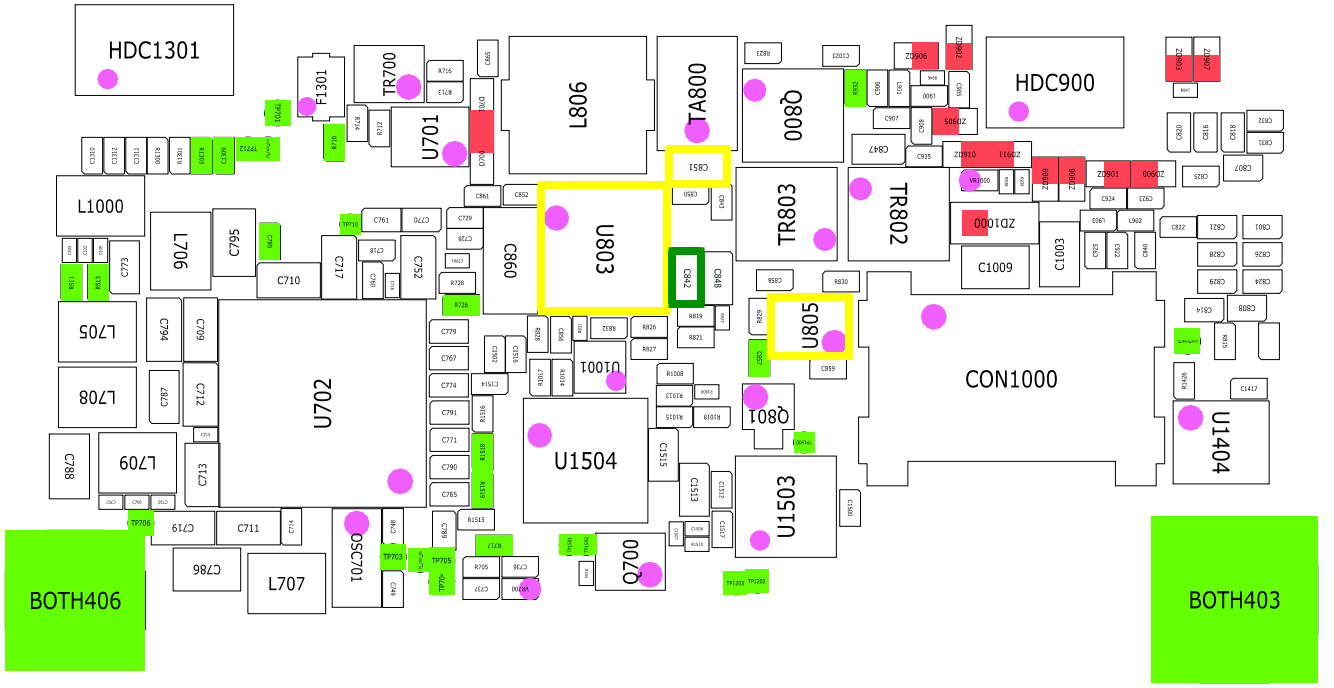
<SWITCHING CHARGING BLOCK>



<EXT_JIG_POWER_CONTROL>

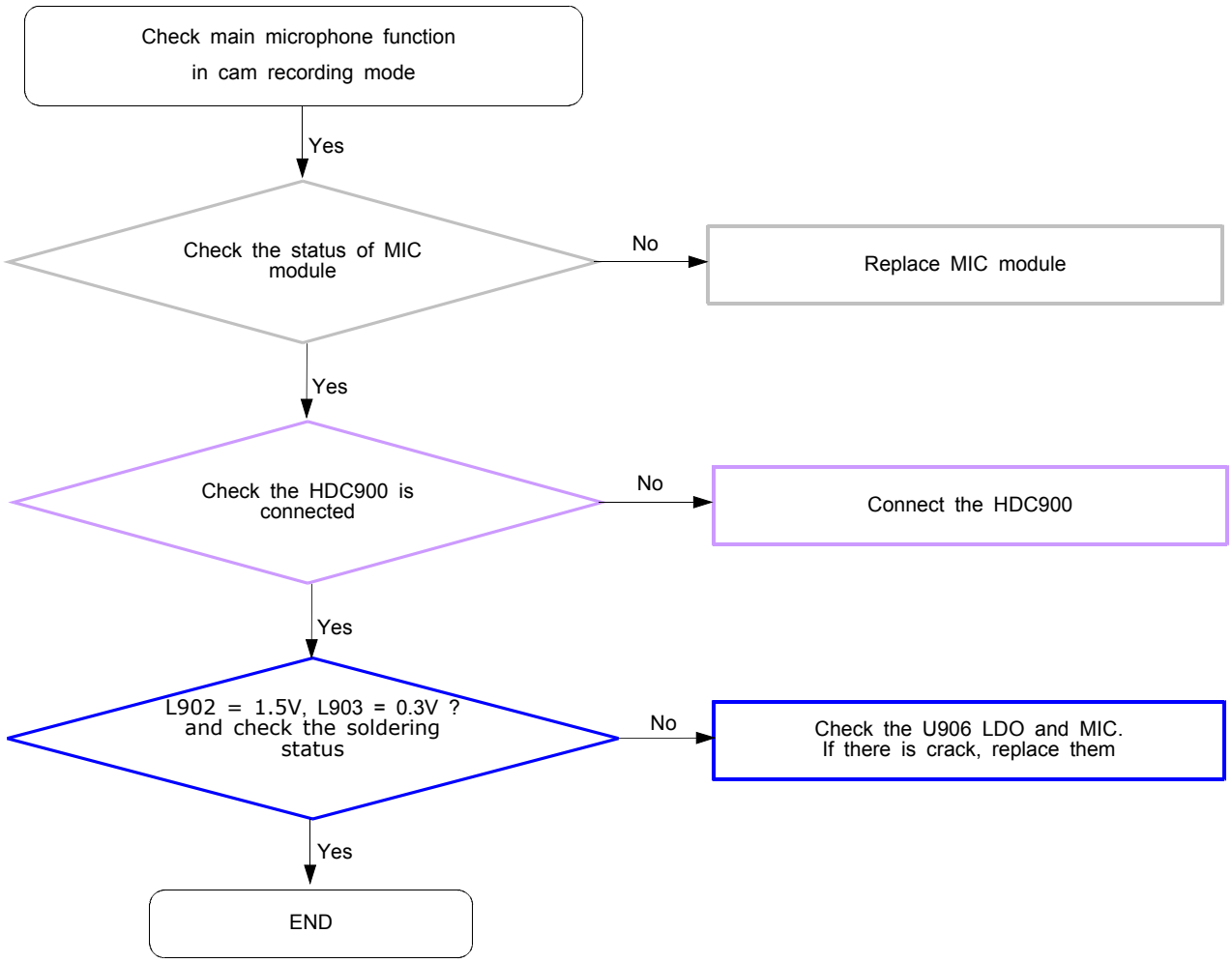
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



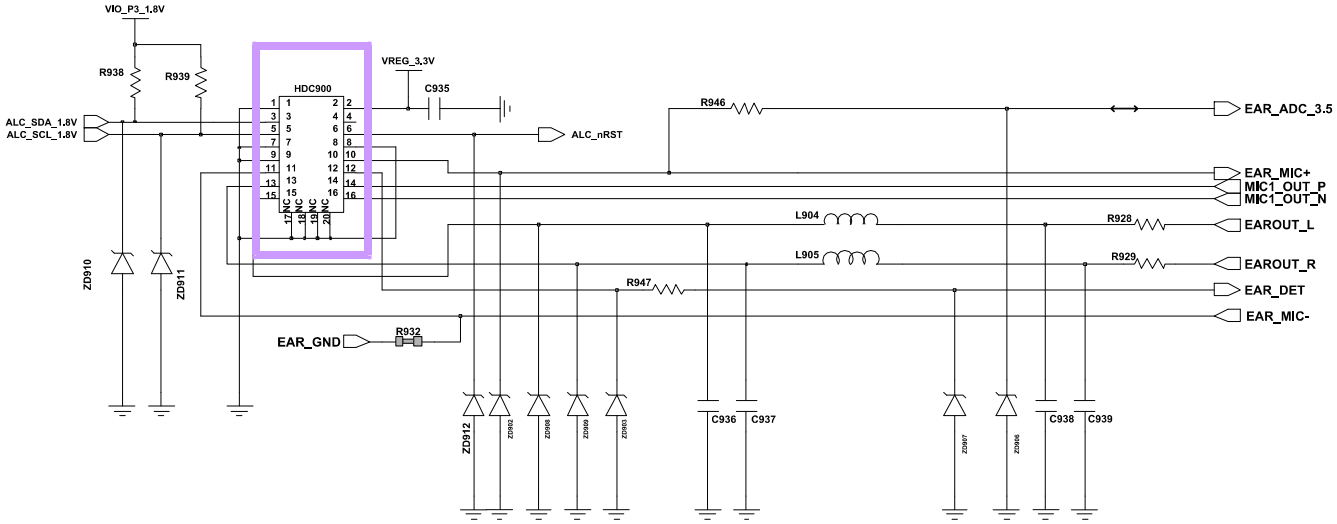


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

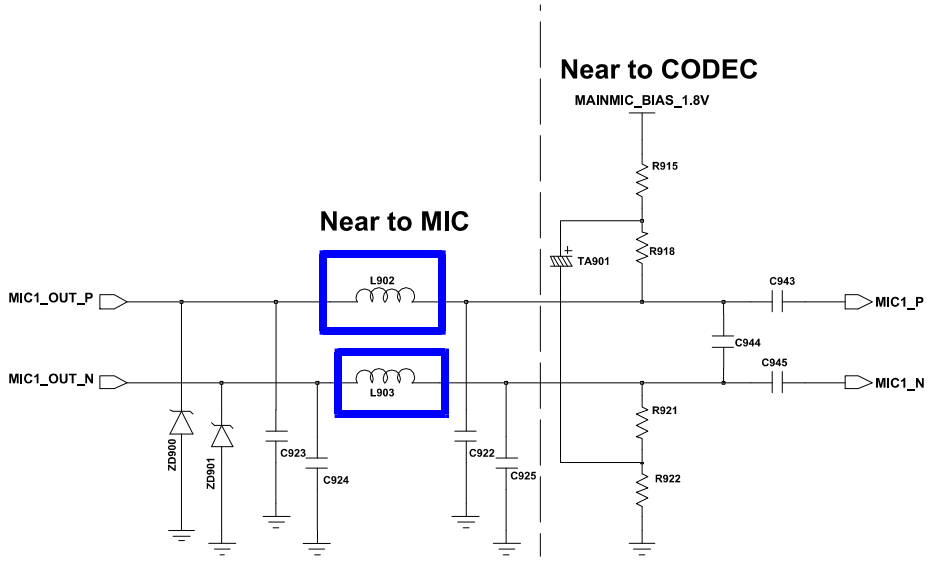
8-3-6. Microphone Part



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

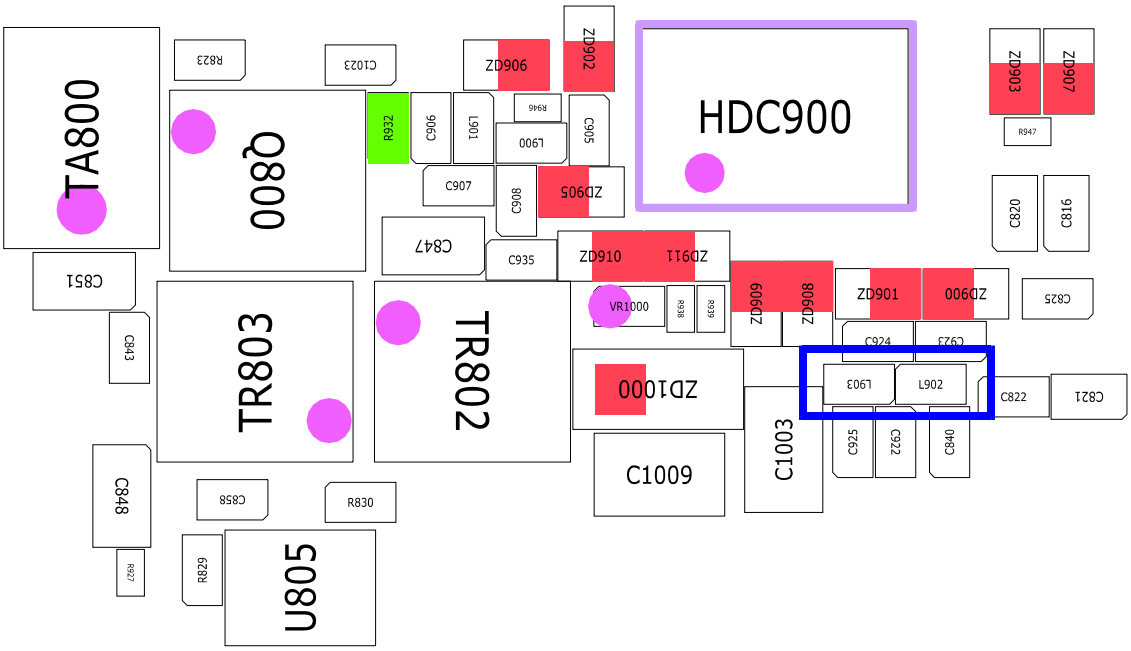


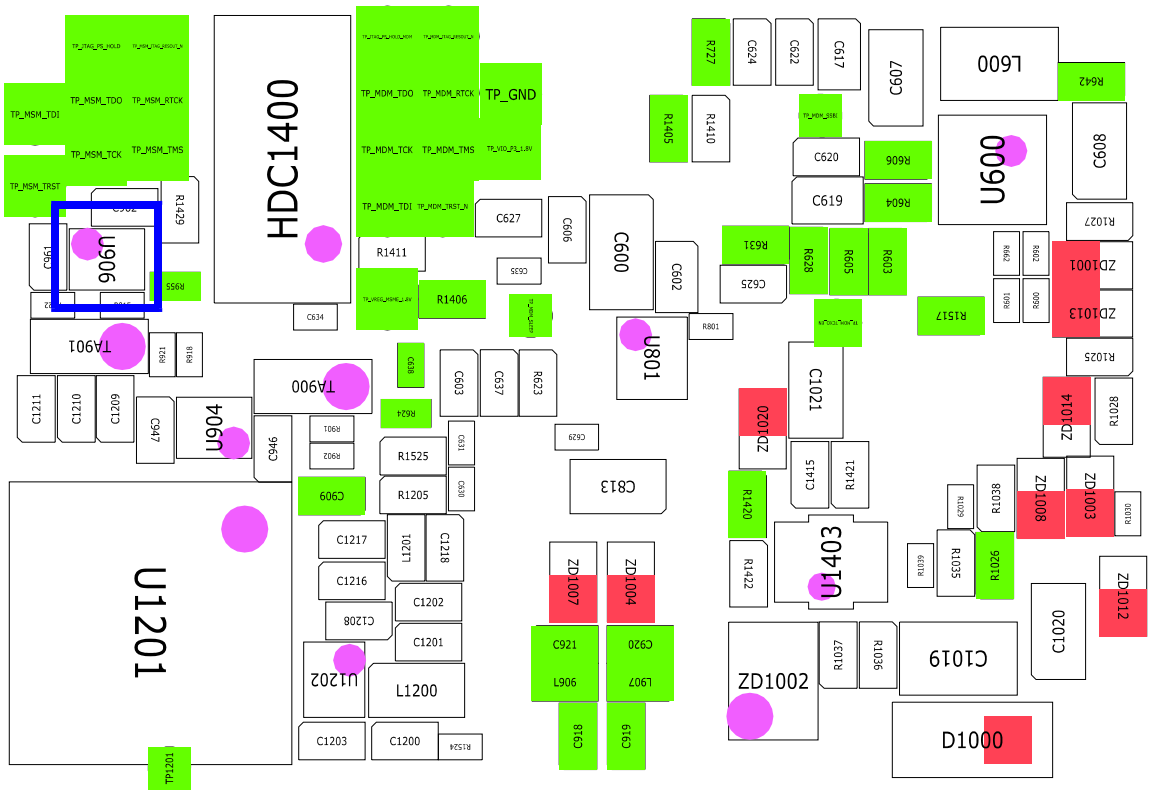
3.5PI EARJACK



MAIN MIC

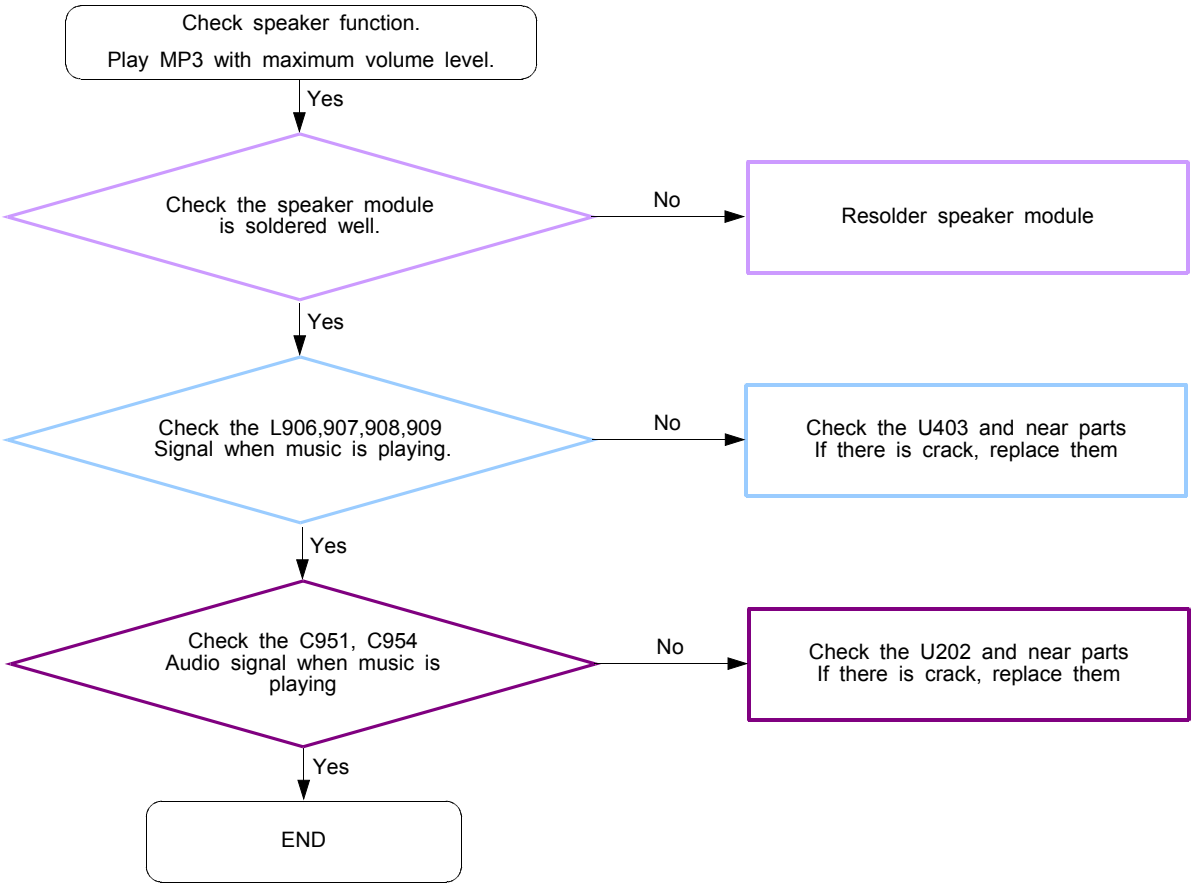
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



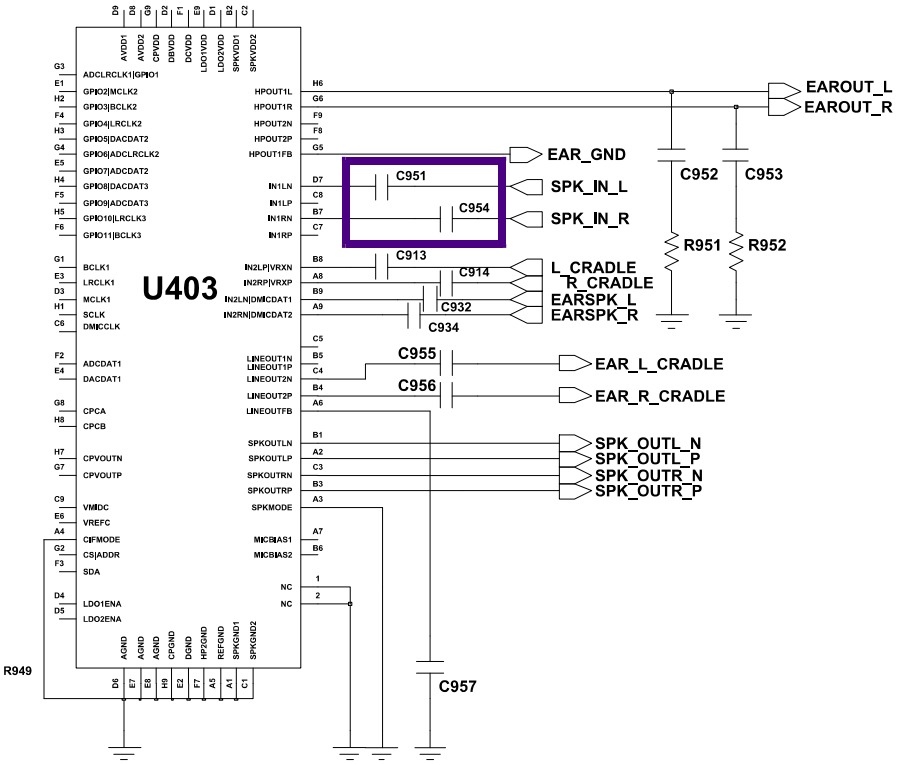


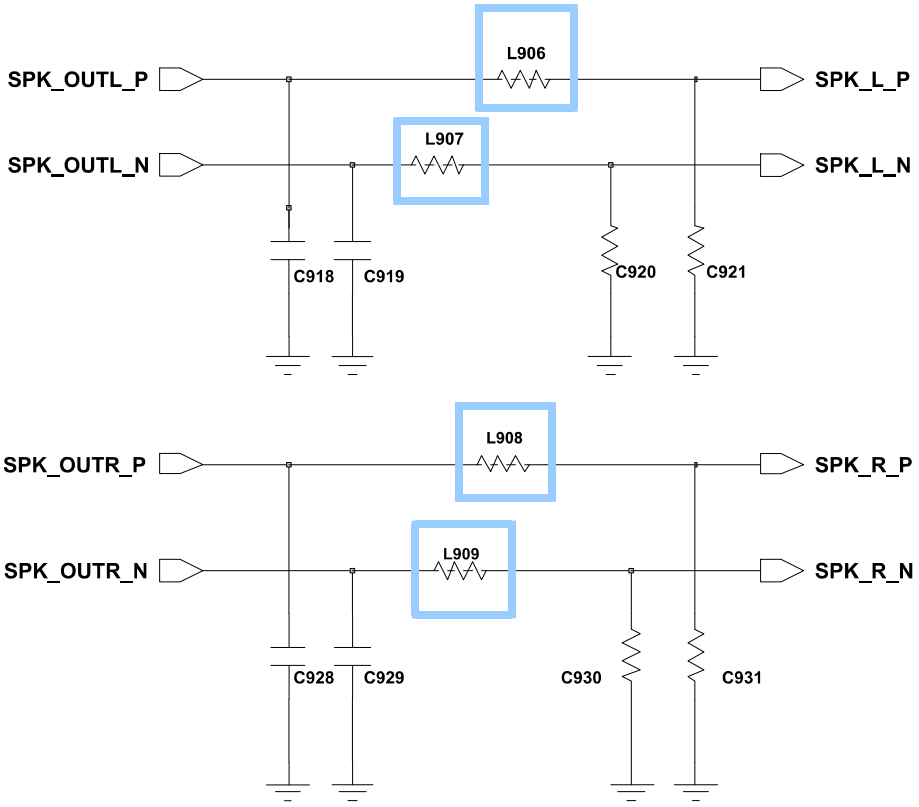
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-7. Speaker Part

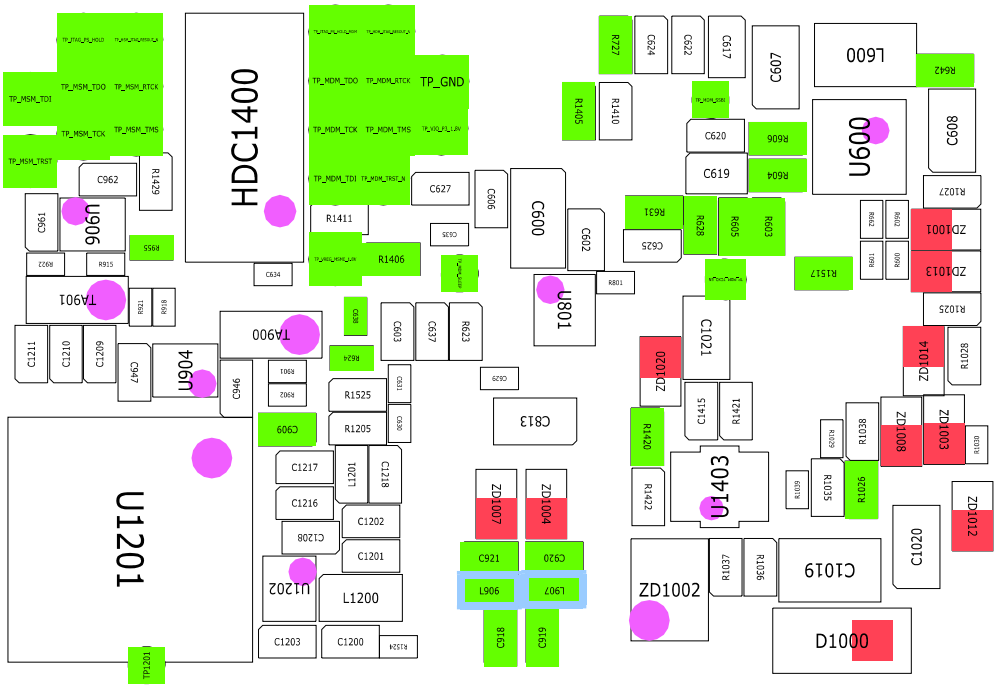

Check speaker function.
Play MP3 with maximum volume level.
Yes
Check the speaker module is soldered well.
No
Resolder speaker module
Yes
Check the L906,907,908,909 Signal when music is playing.
No
Check the U403 and near parts If there is crack, replace them
Yes
Check the C951, C954 Audio signal when music is playing
No
Check the U202 and near parts If there is crack, replace them
Yes
END

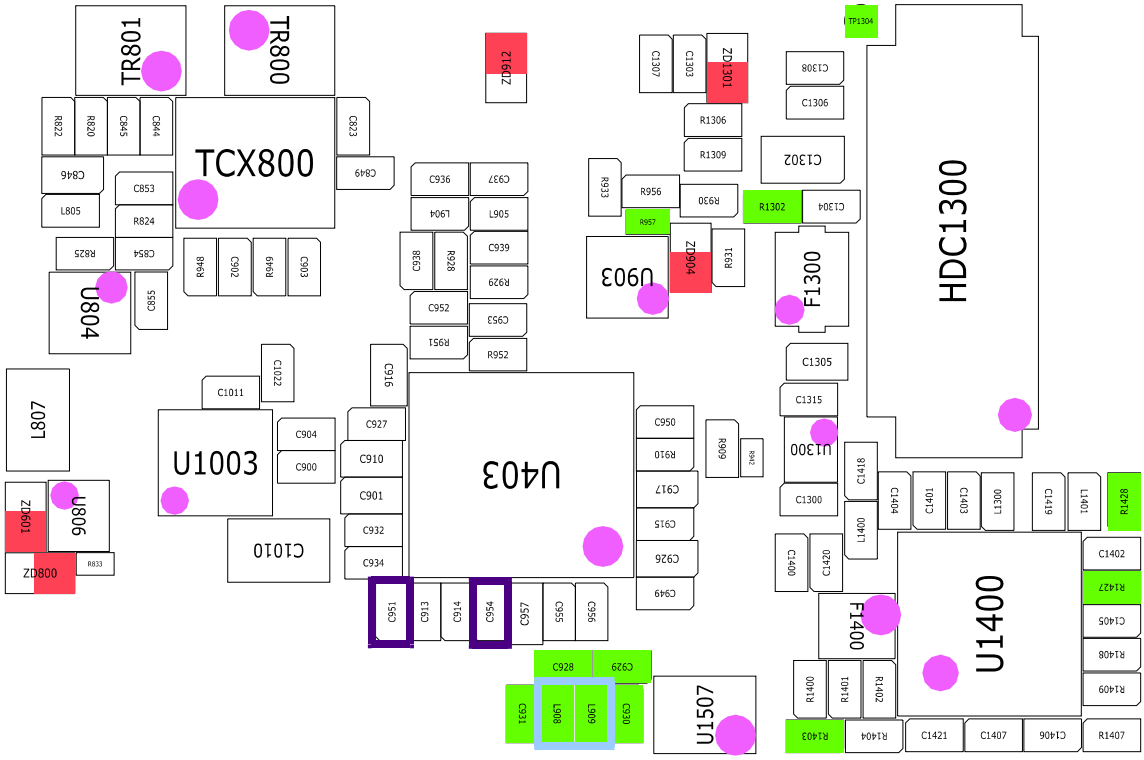
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.





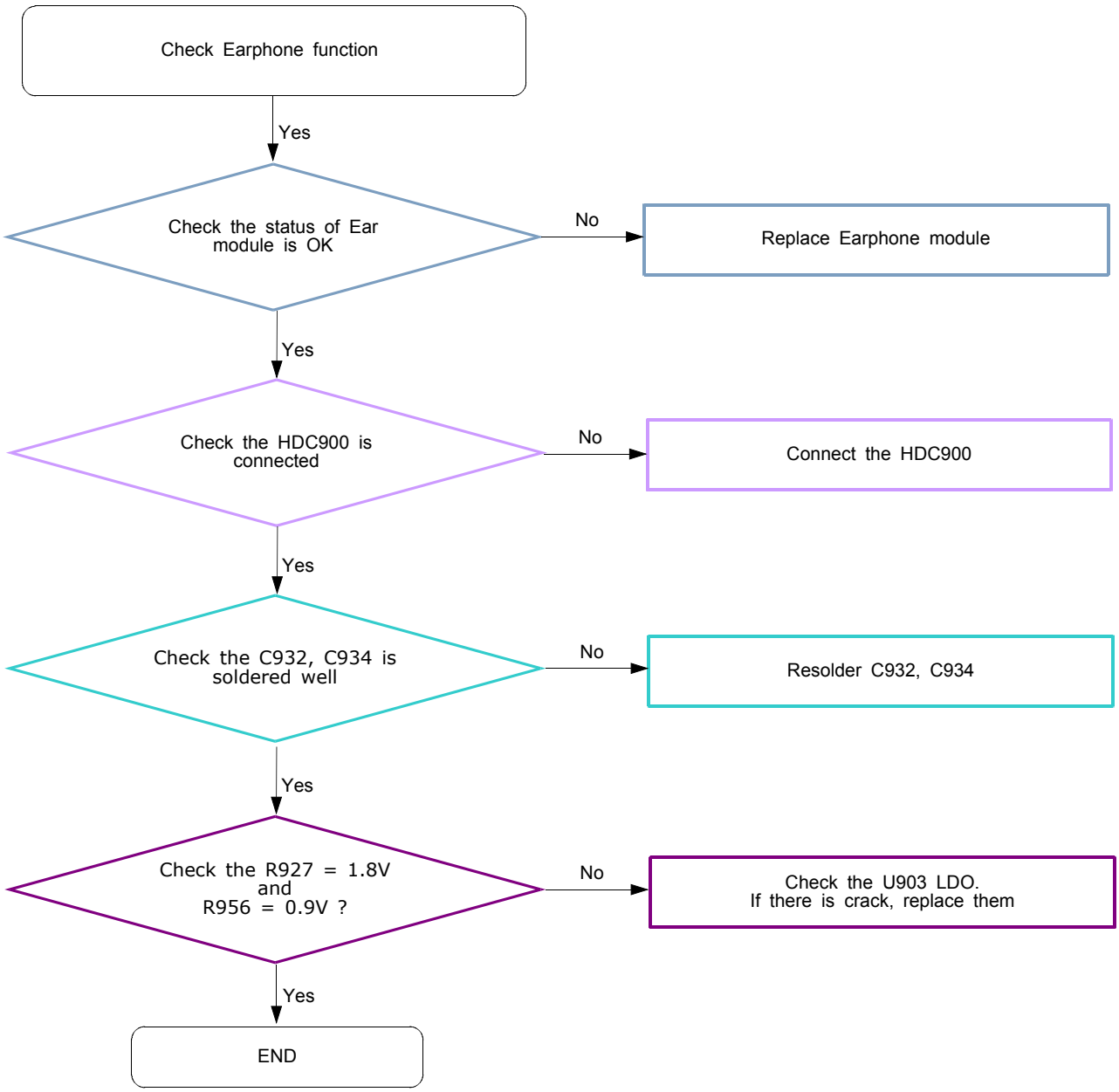
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



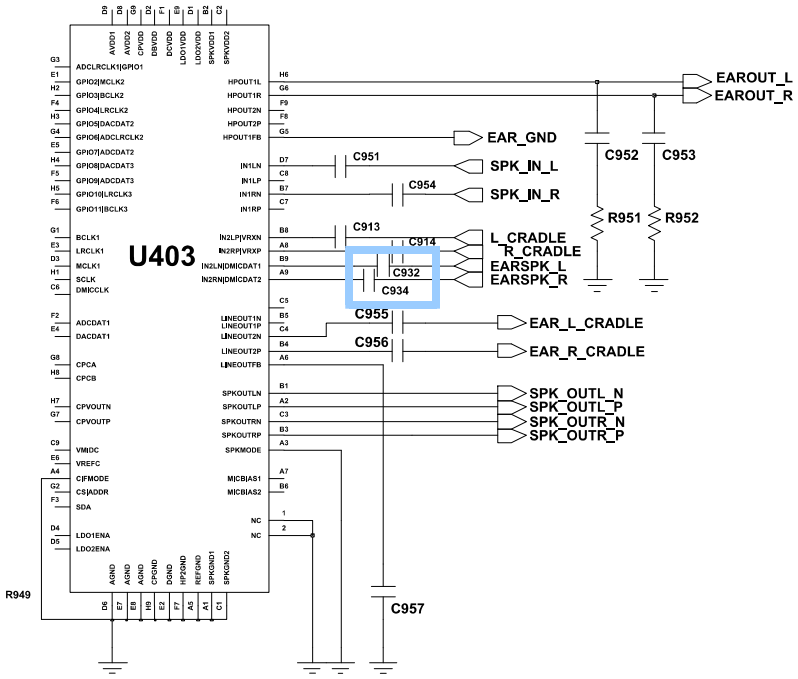


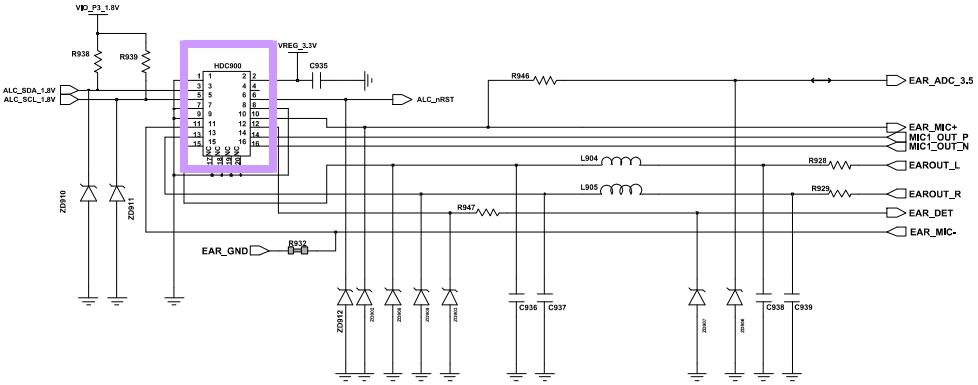
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-8. Earphone Part

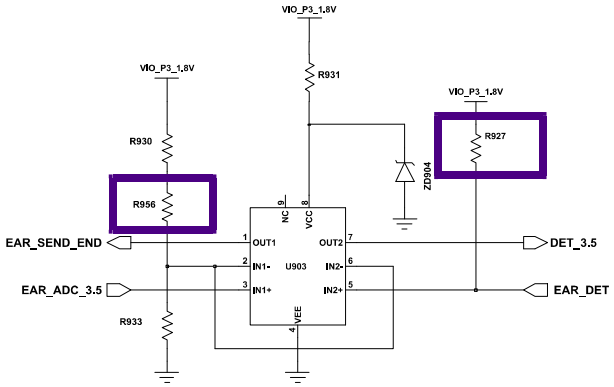


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



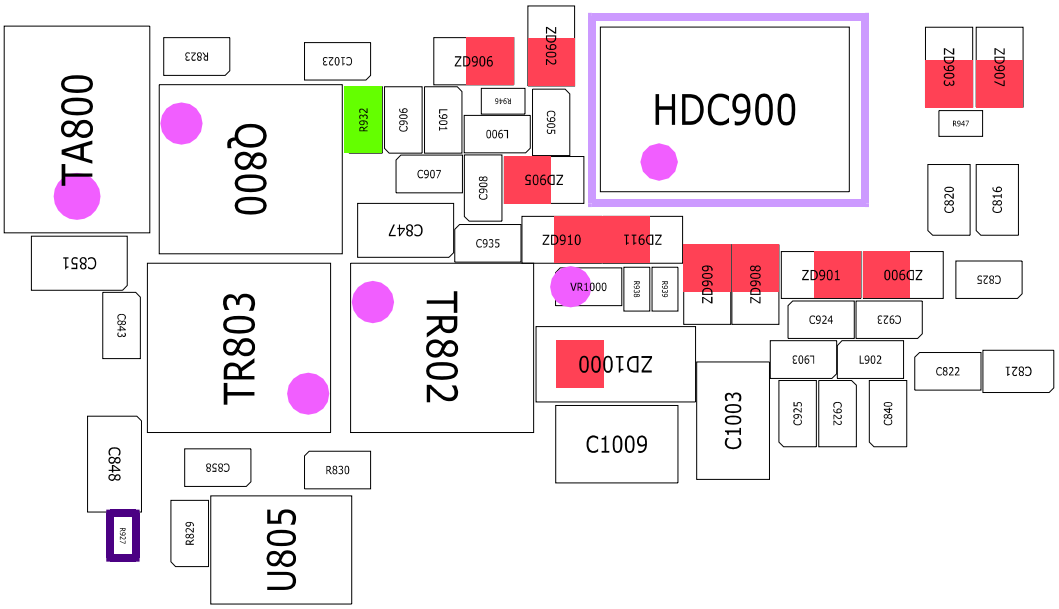


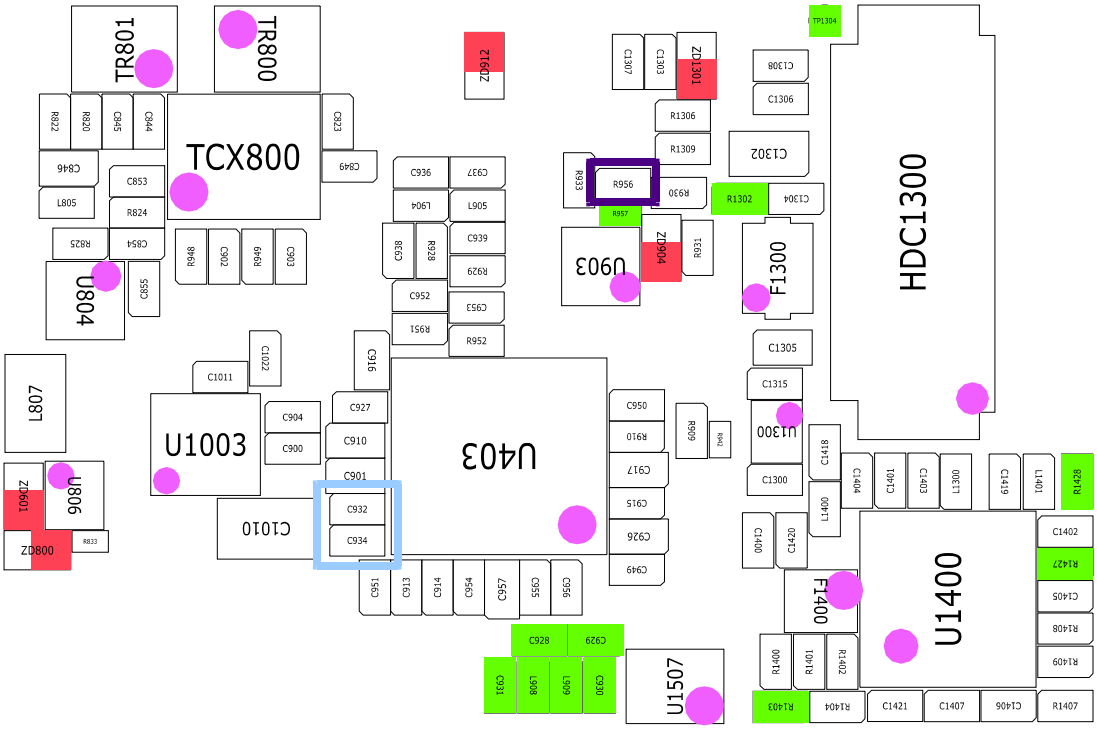
3.5PI EARJACK



COMPARATOR

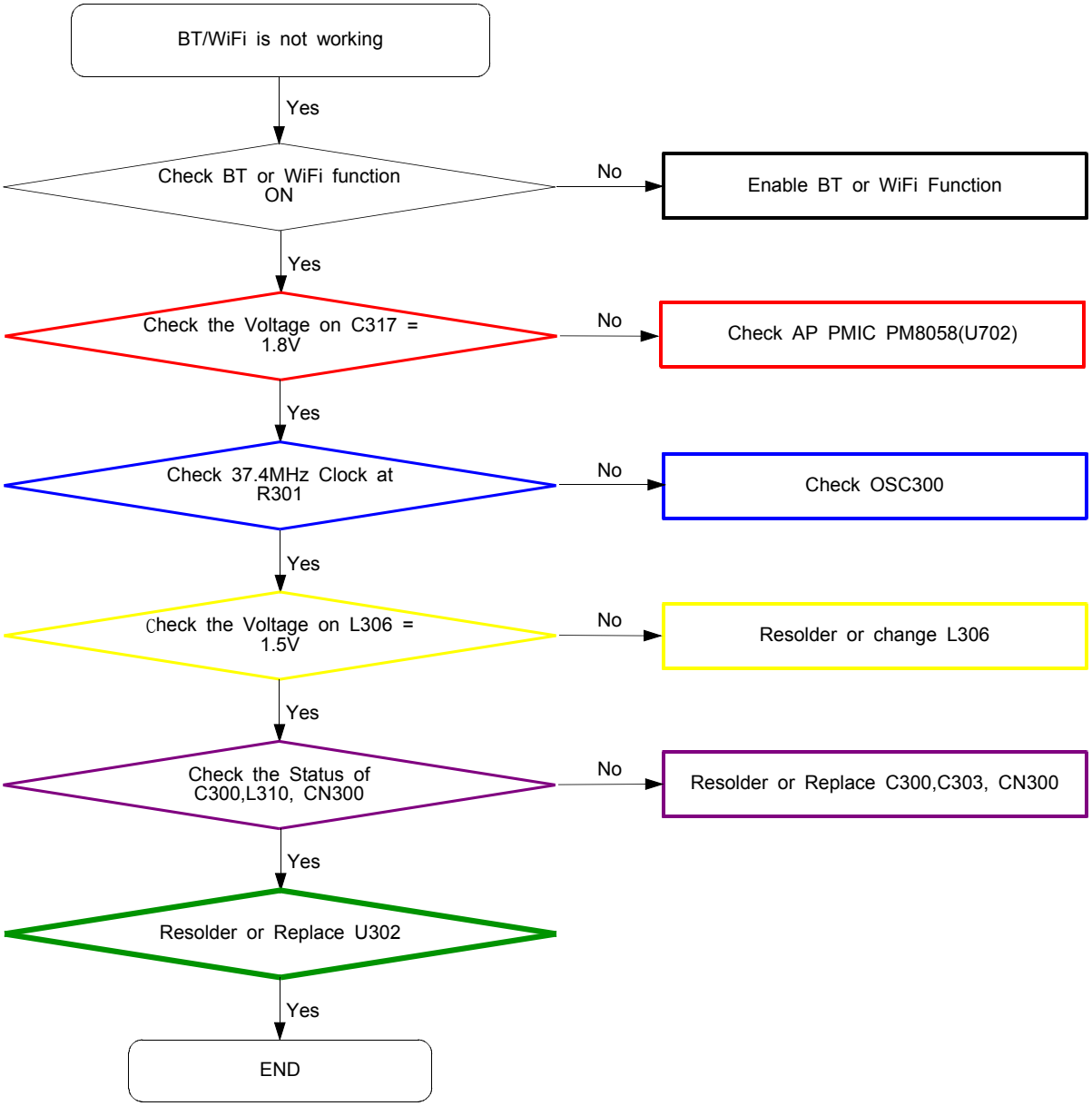
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.





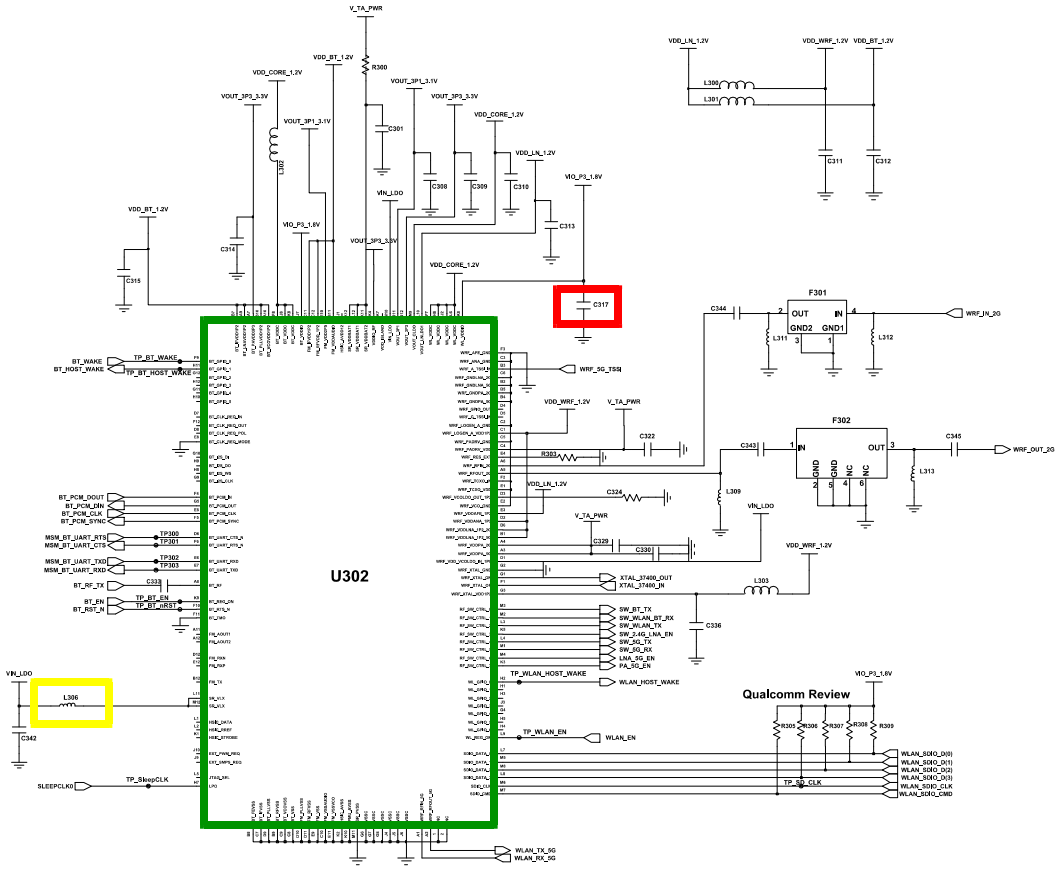
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

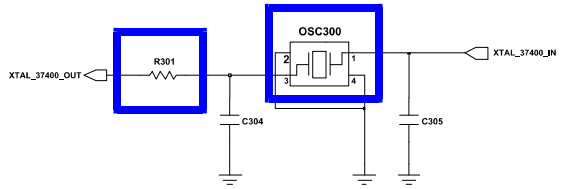
8-3-9. BT/WIFI



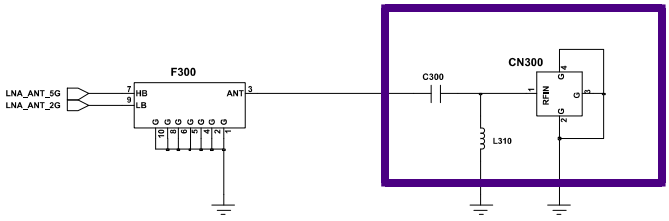
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

BT / WLAN



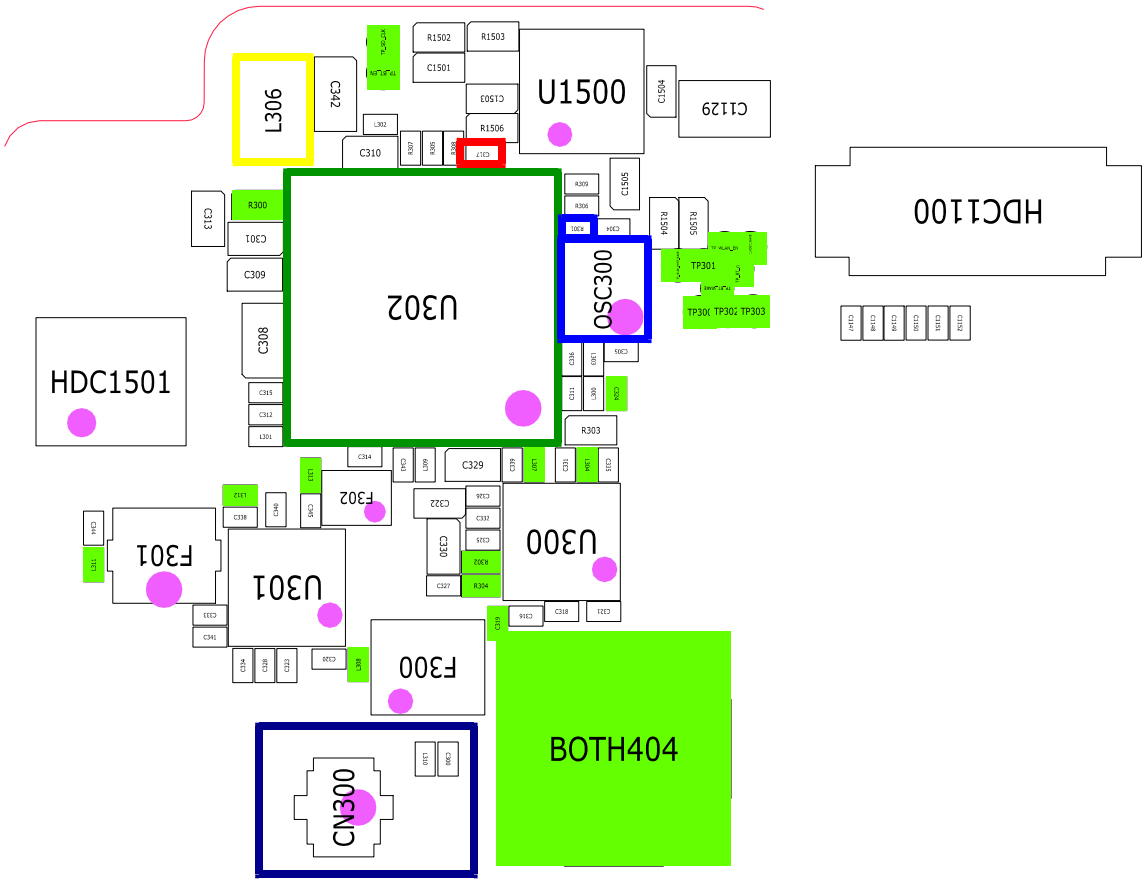


BT/WIFI Xtal



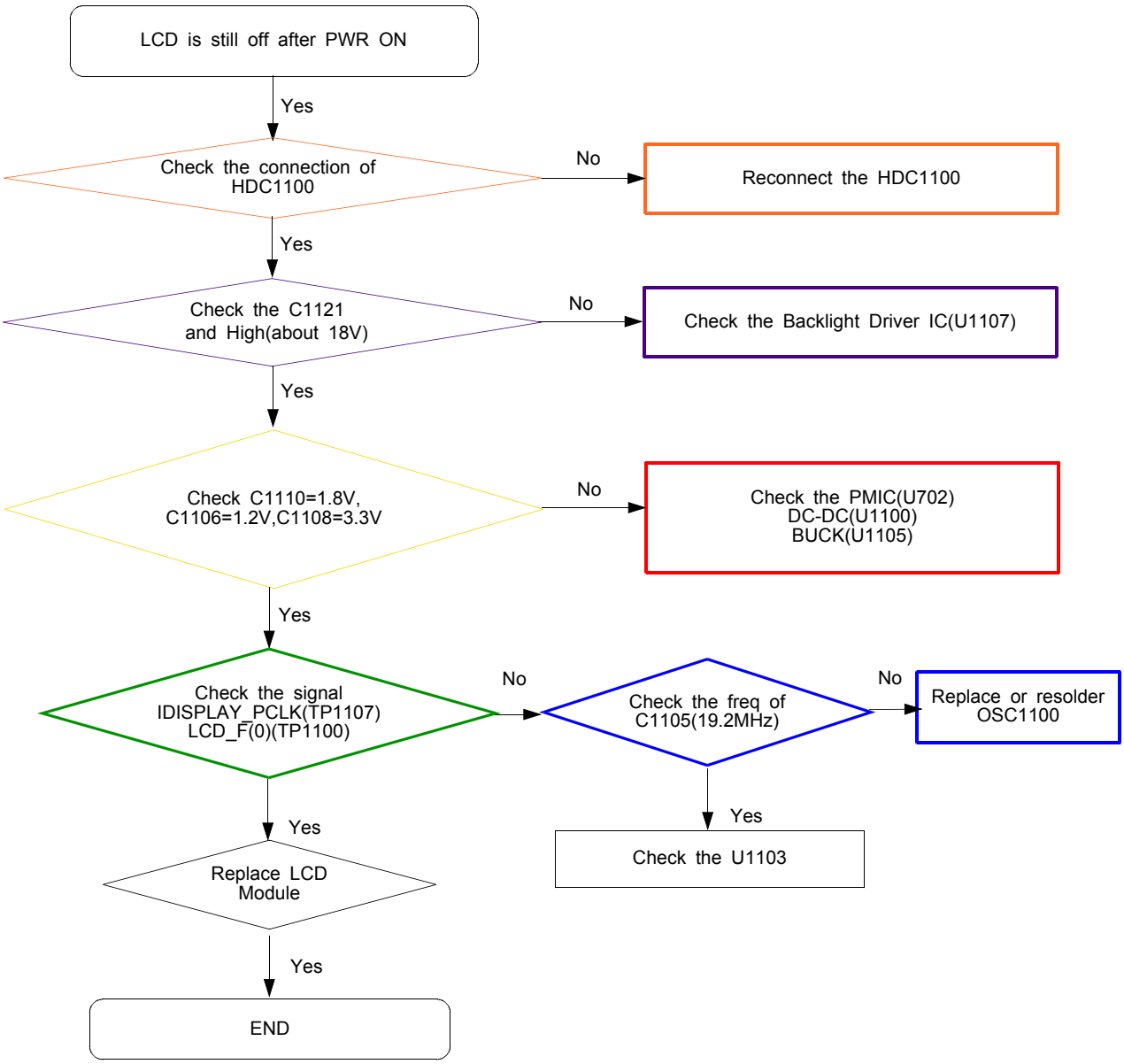
Diplexer

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

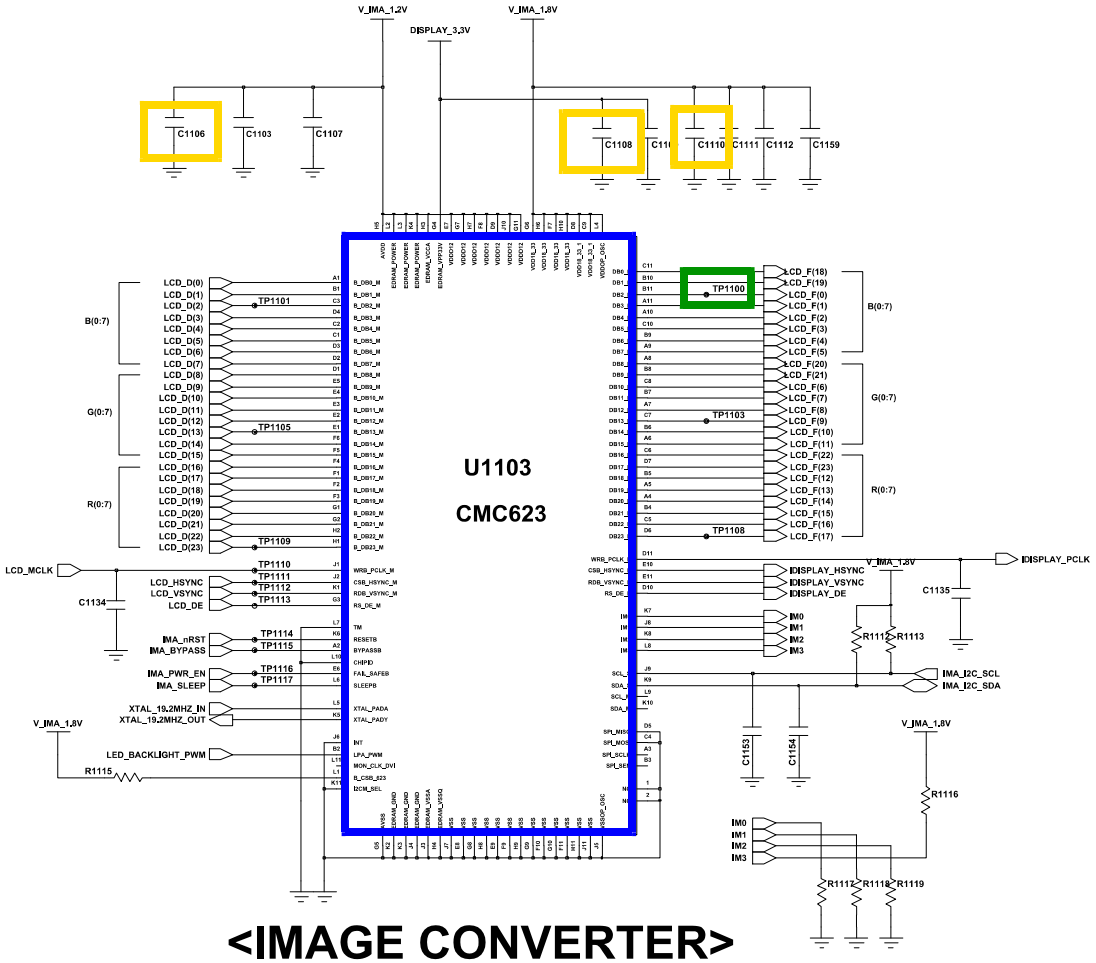


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

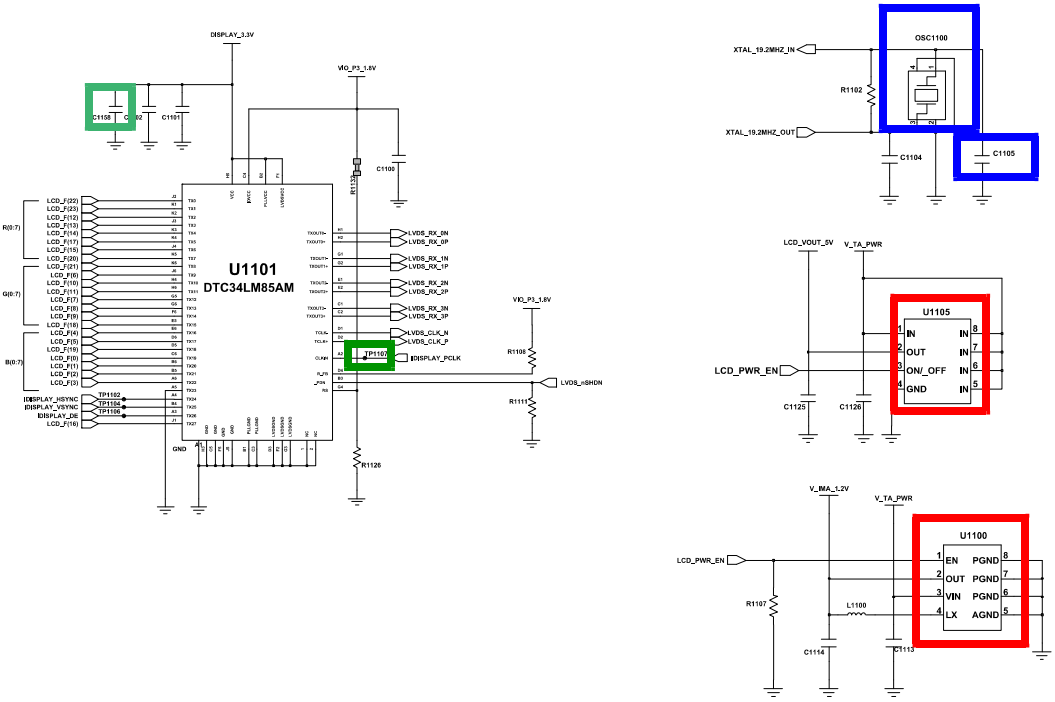
8-3-10. LCD



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



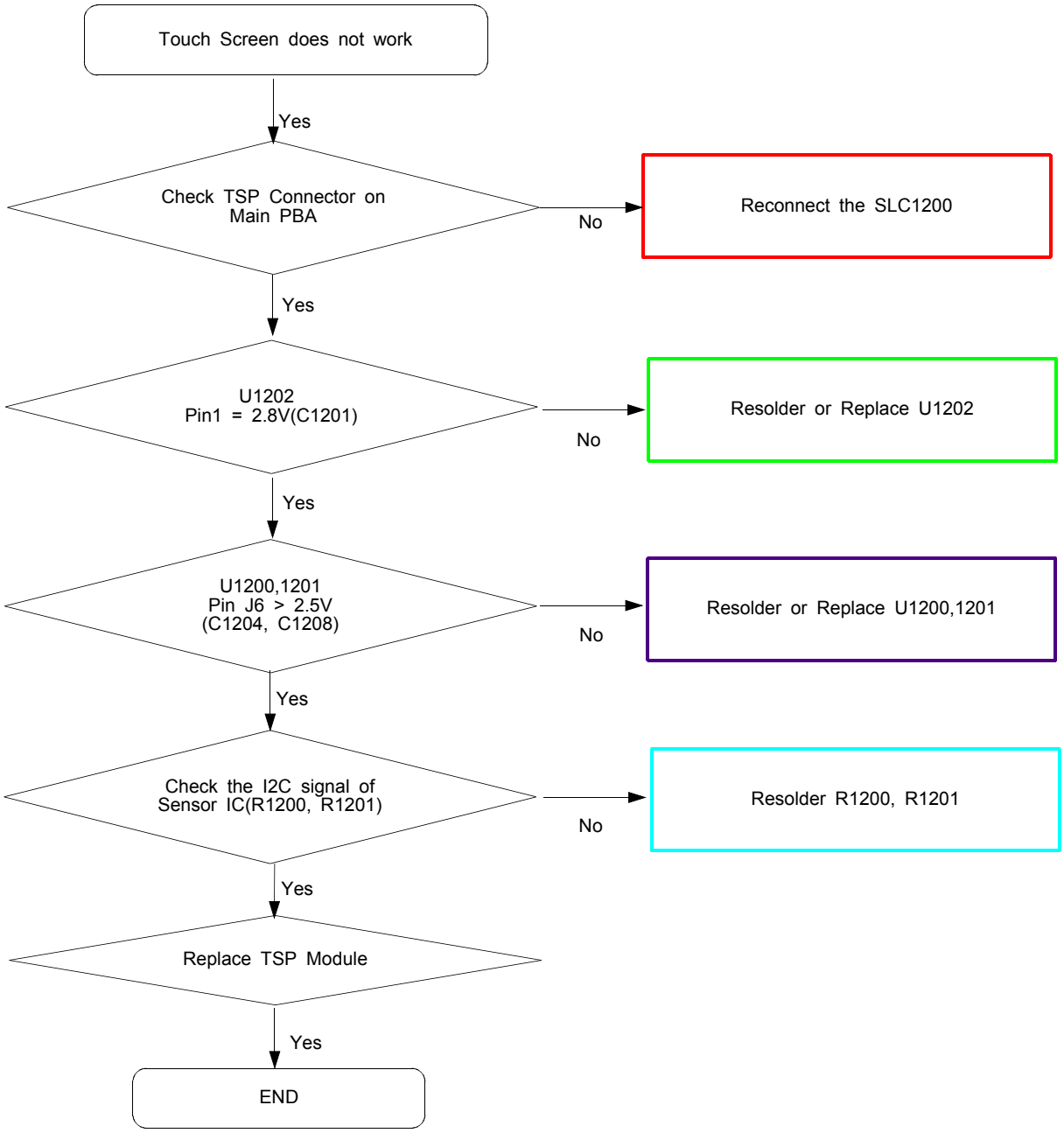
<IMAGE CONVERTER>



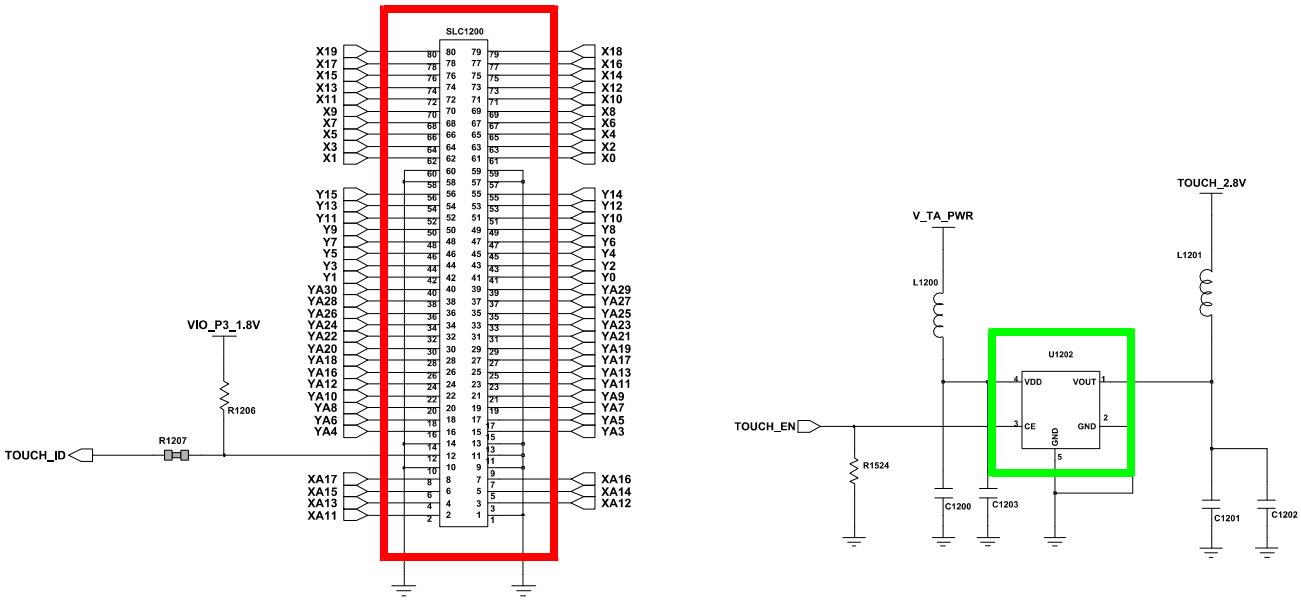
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

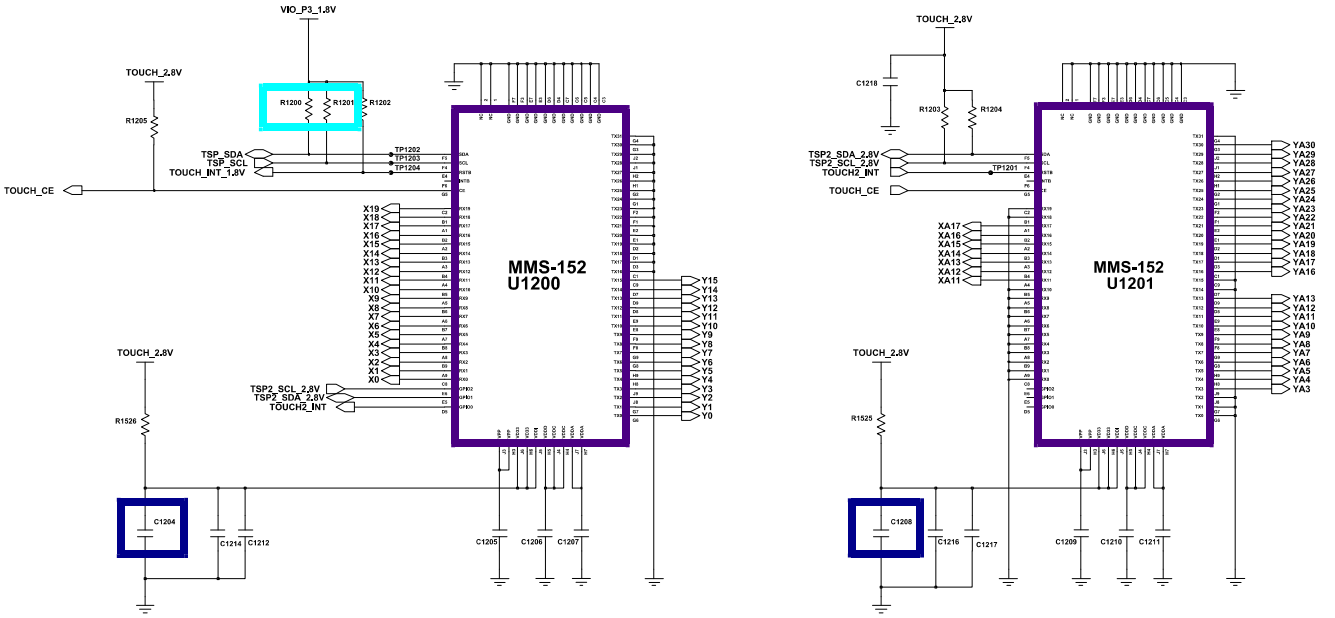
8-3-11. TSP



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

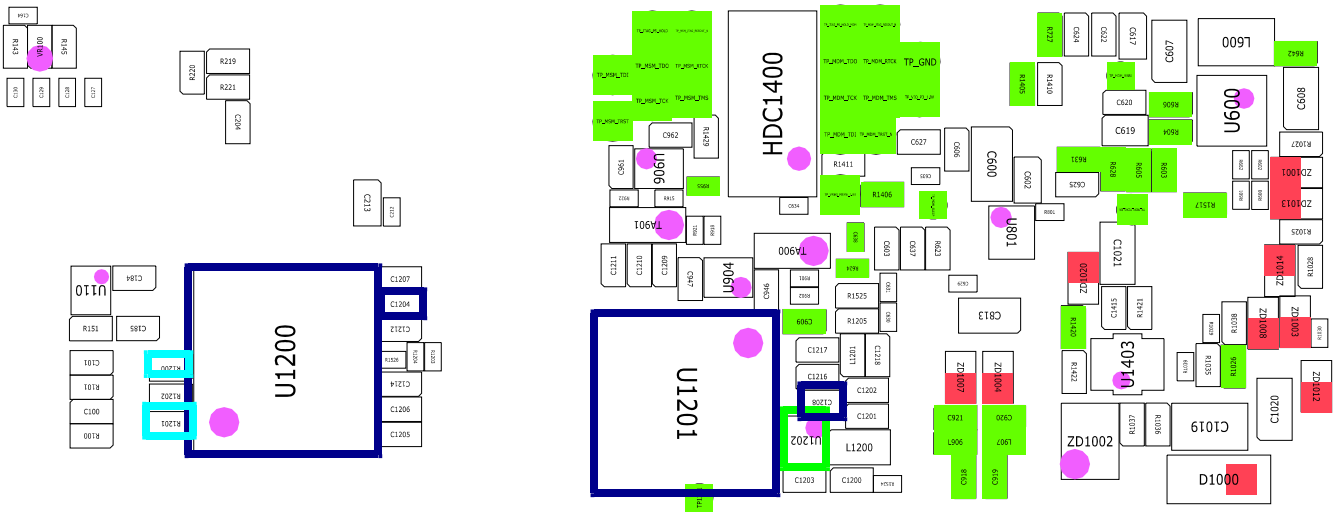


<80Pin TOUCH Con.>



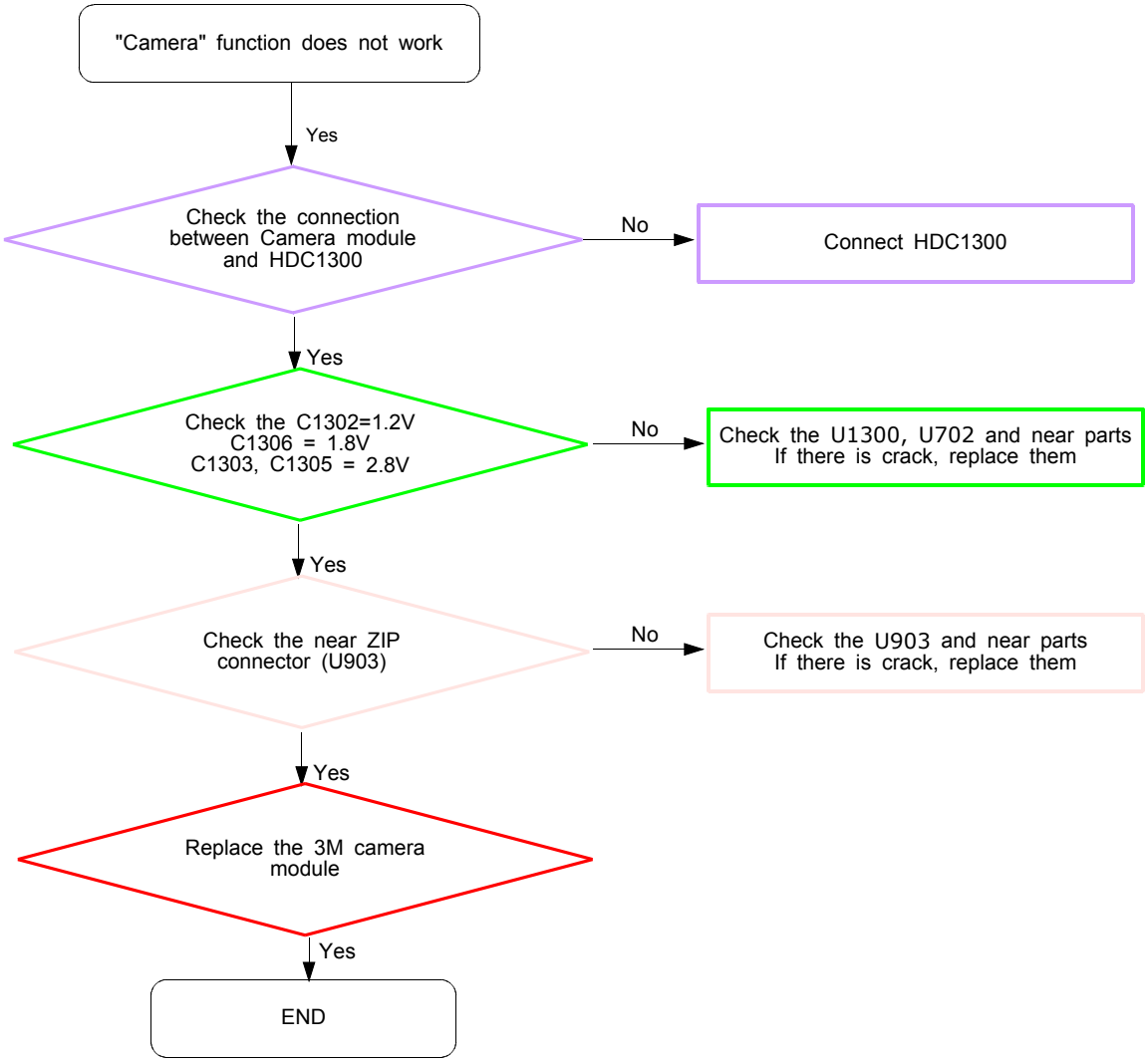
<TOCH SENSOR IC>

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

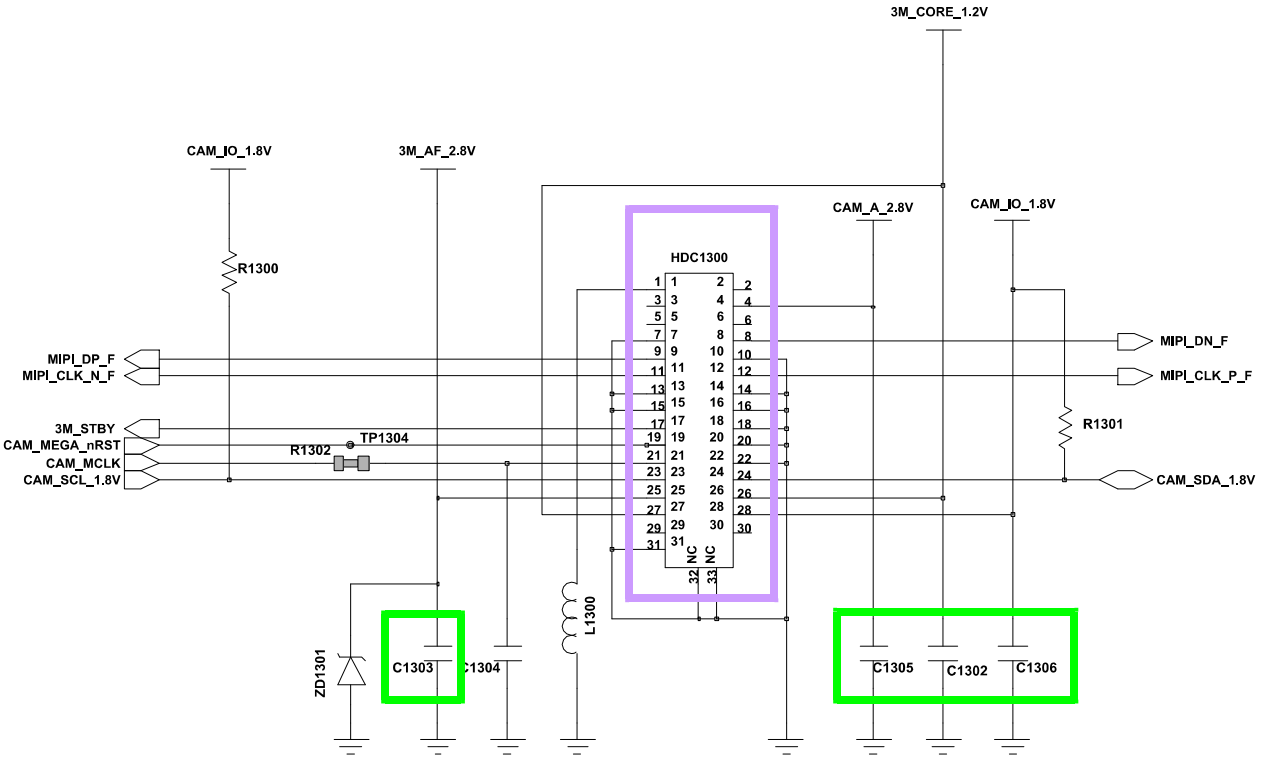


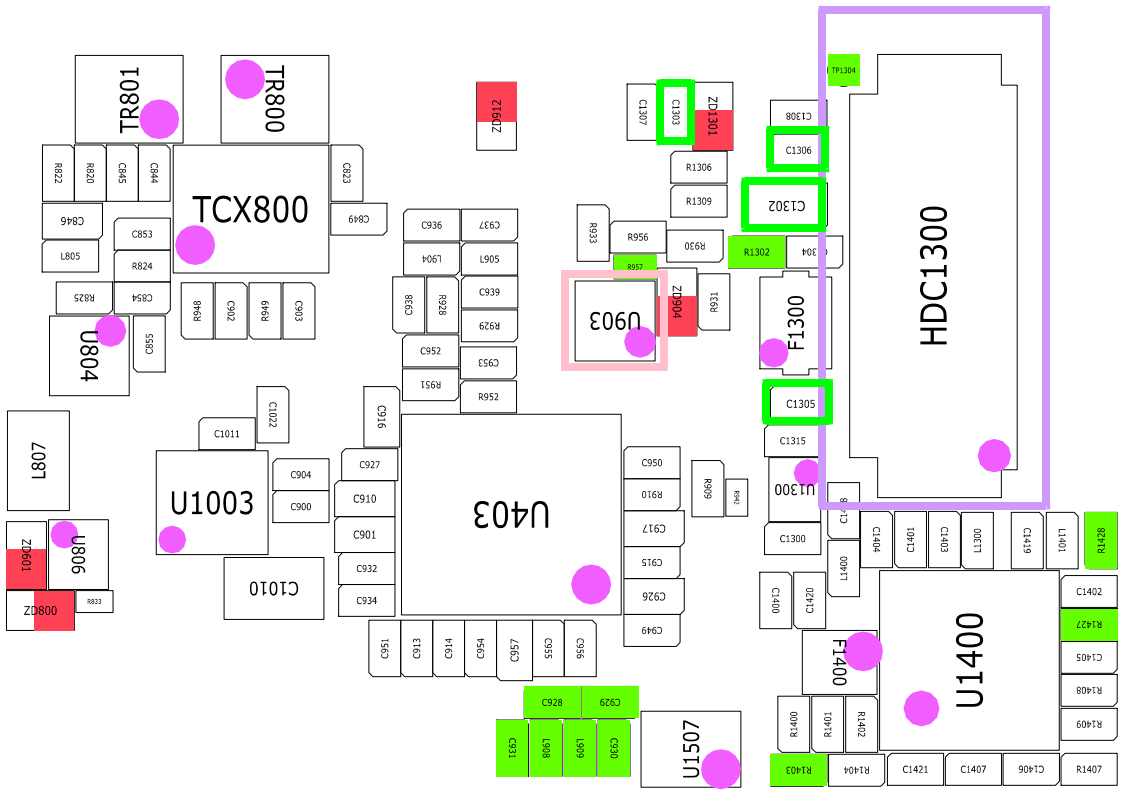
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-12. 3M CAM


"Camera" function does not work
Yes
Check the connection between Camera module and HDC1300
No
Connect HDC1300
Yes
Check the C1302=1.2V C1306 = 1.8V C1303, C1305 = 2.8V
No
Check the U1300, U702 and near parts If there is crack, replace them
Yes
Check the near ZIP connector (U903)
No
Check the U903 and near parts If there is crack, replace them
Yes
Replace the 3M camera module
Yes
END

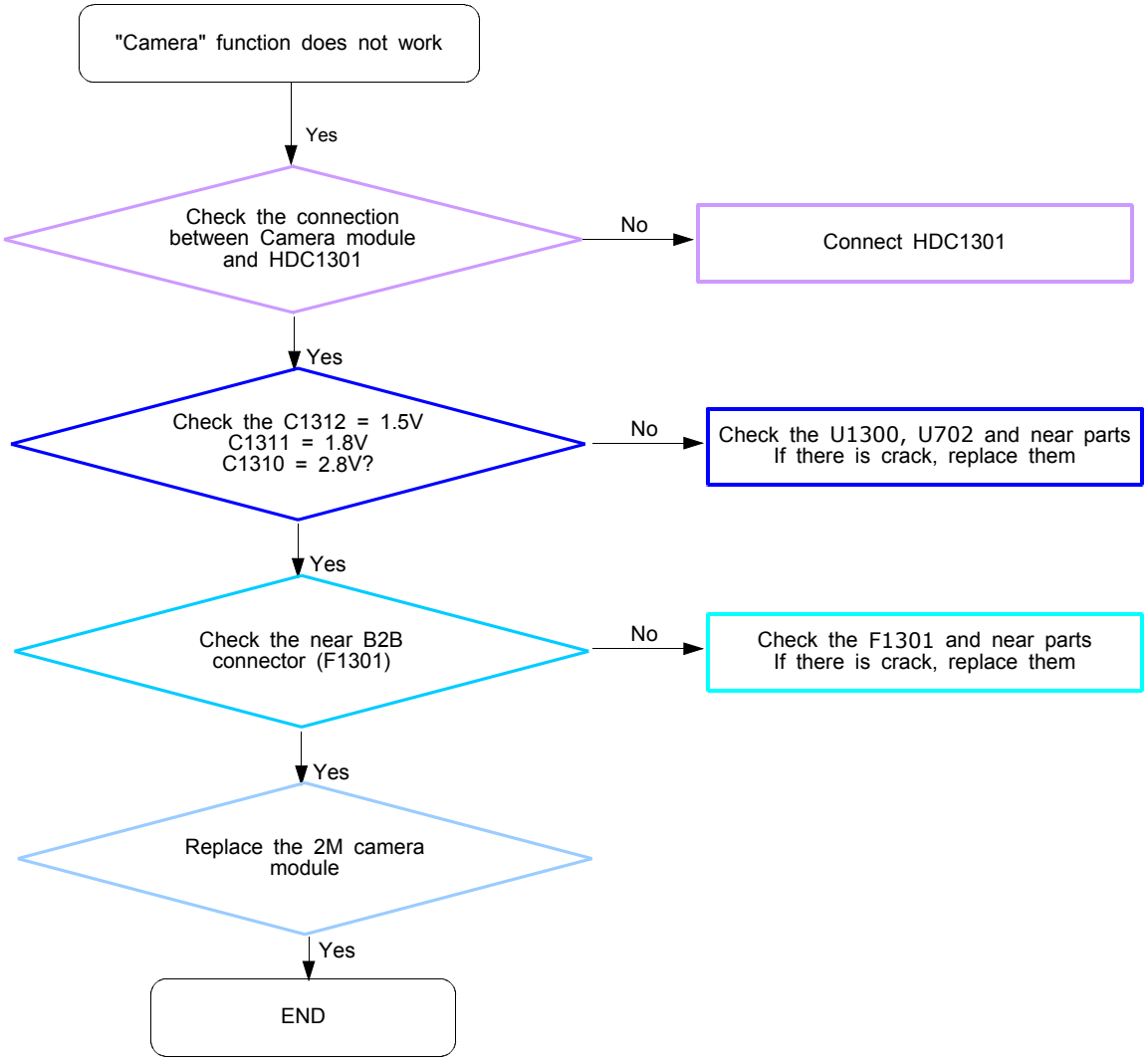
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



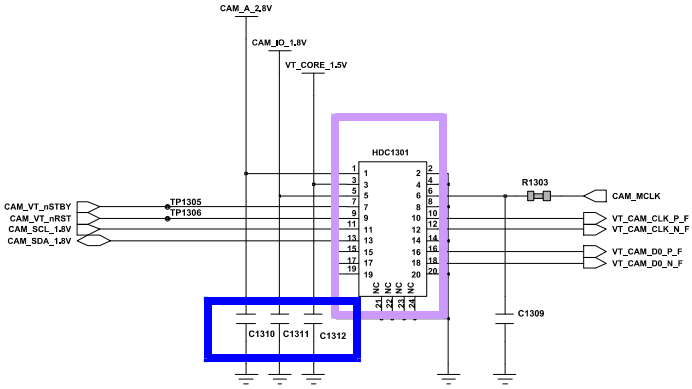


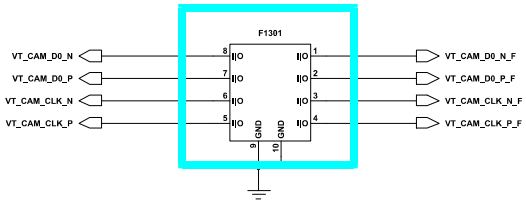
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

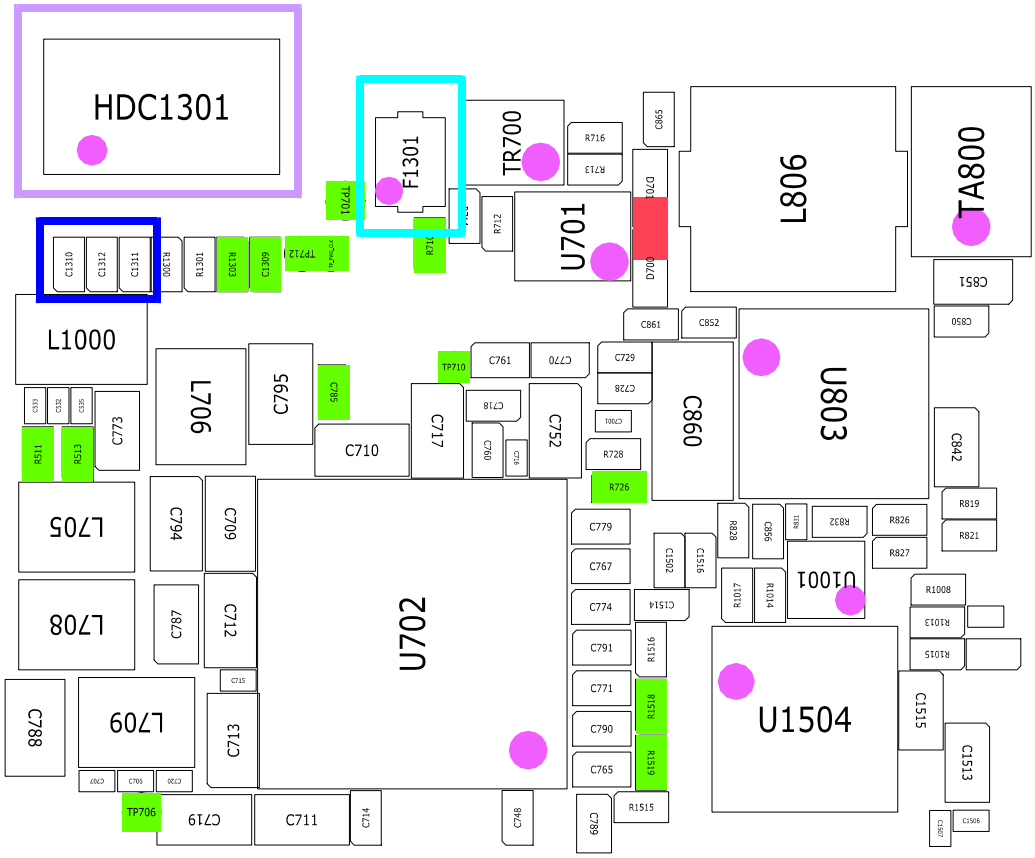
8-3-13. 2M CAM



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

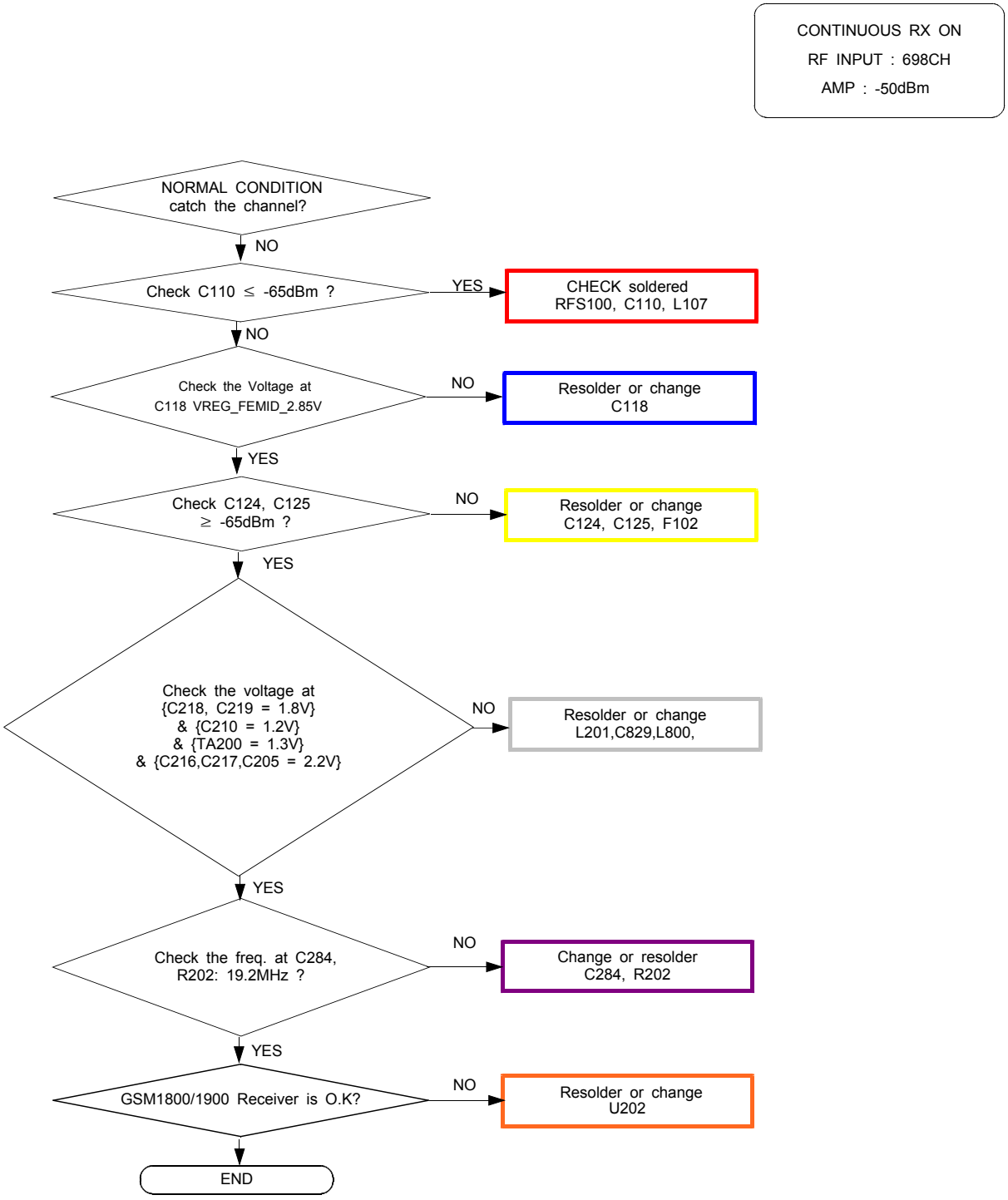




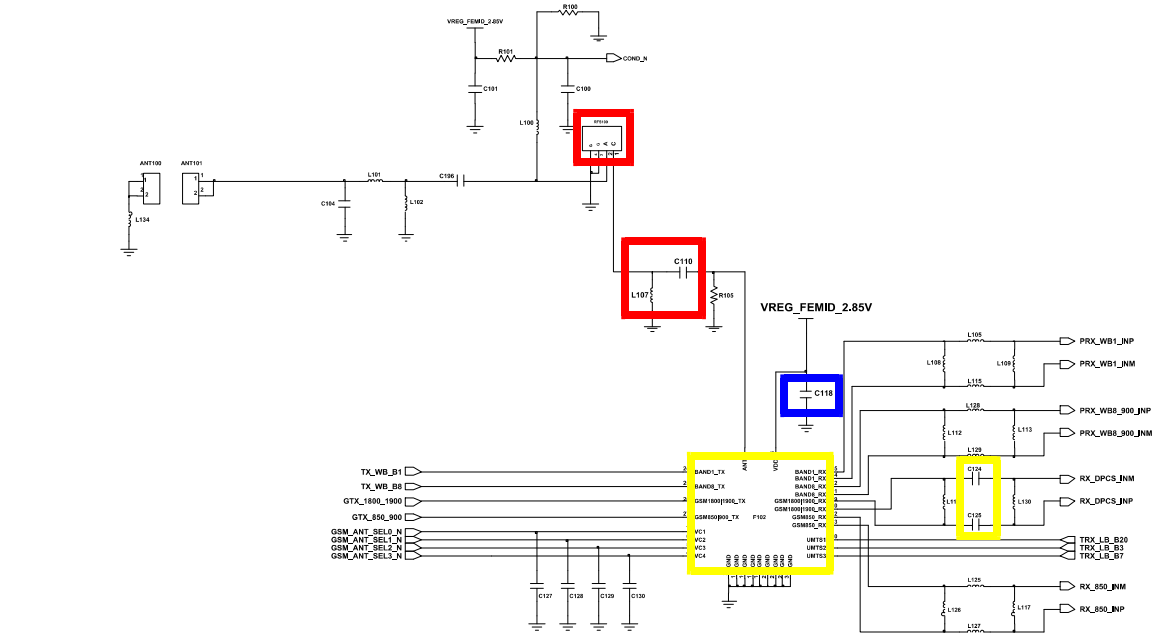


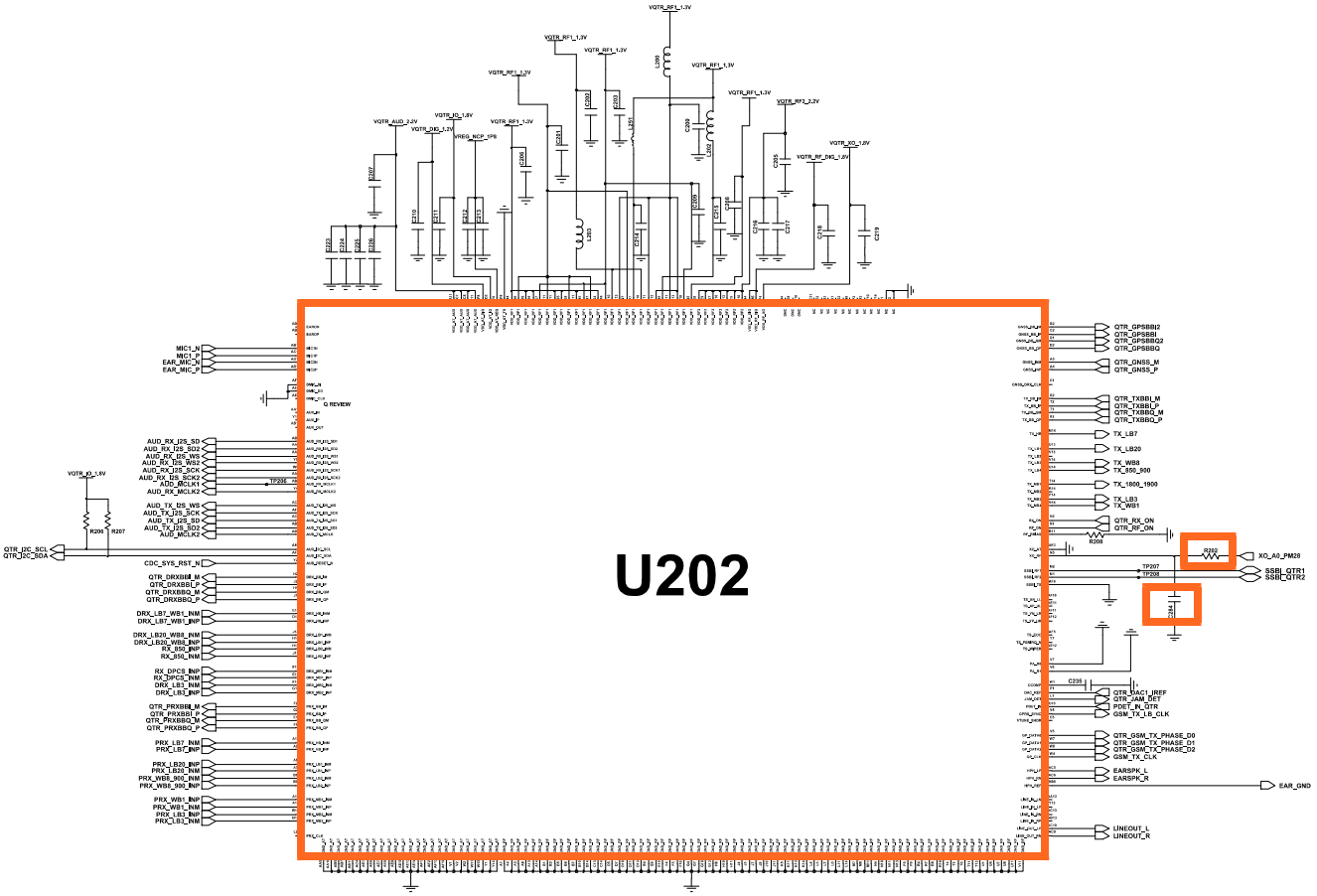
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-14. GSM1800/1900 RX

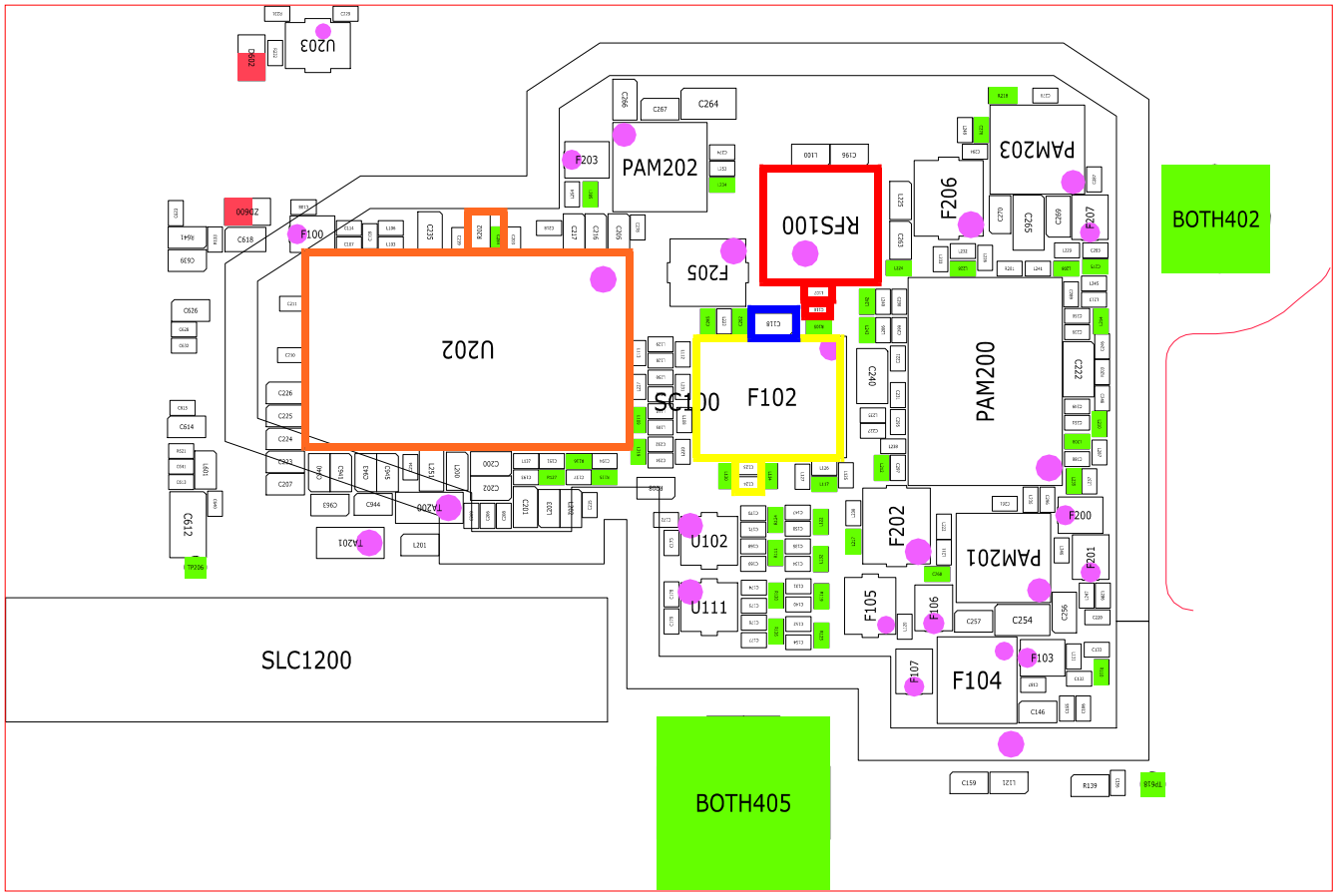


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



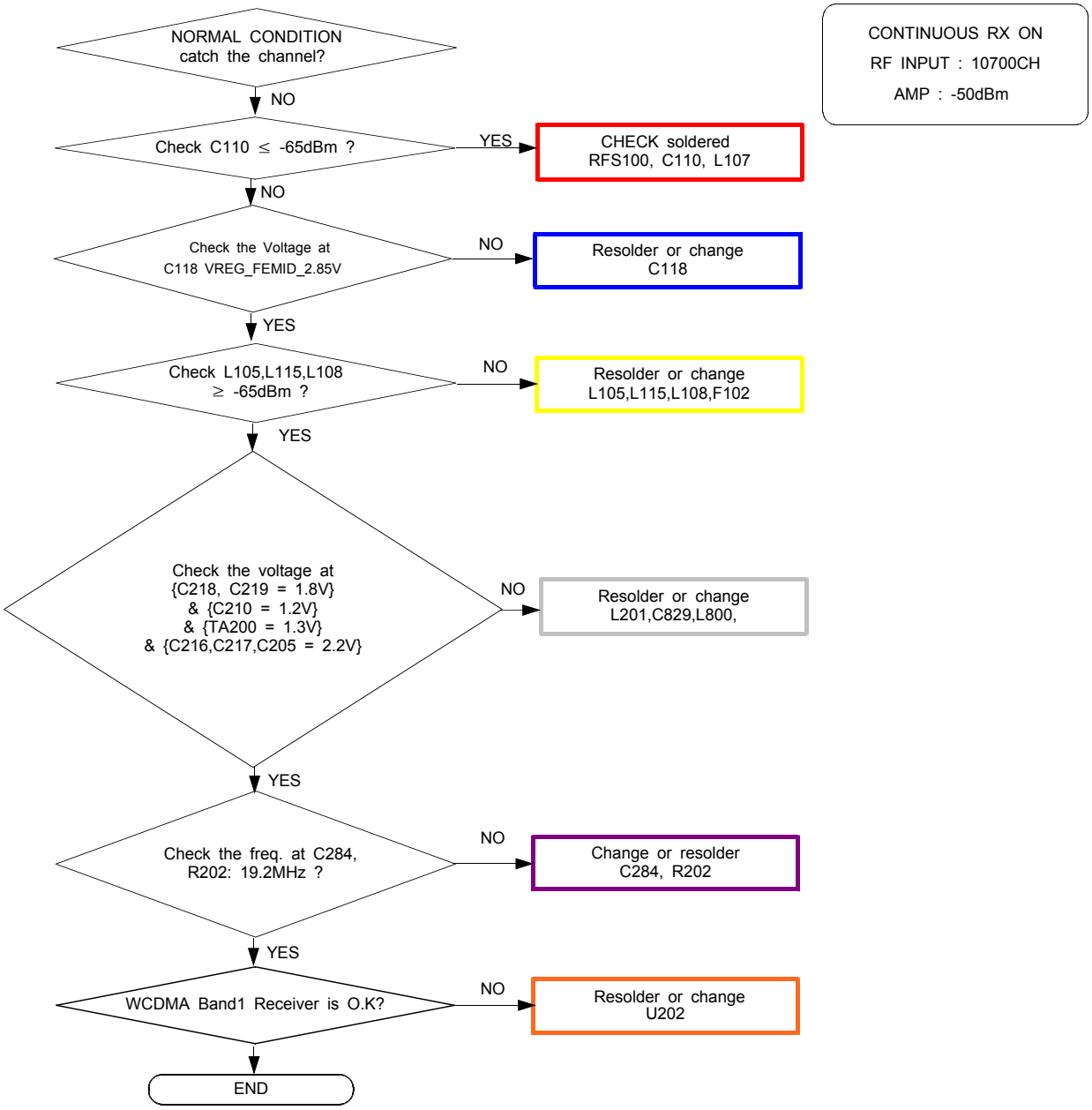


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

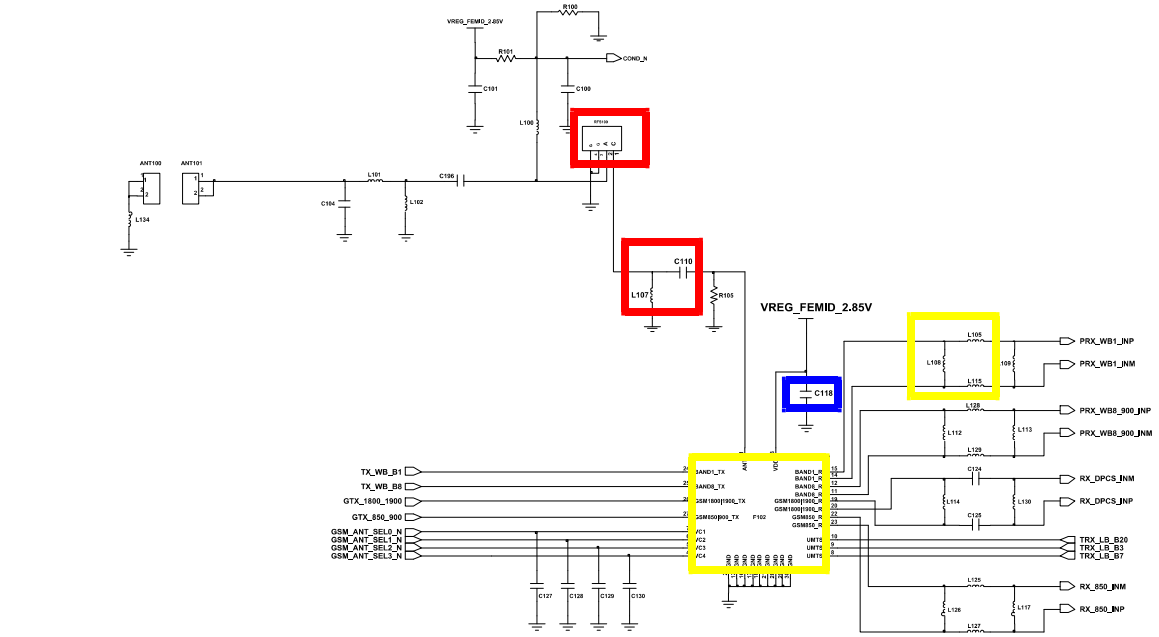


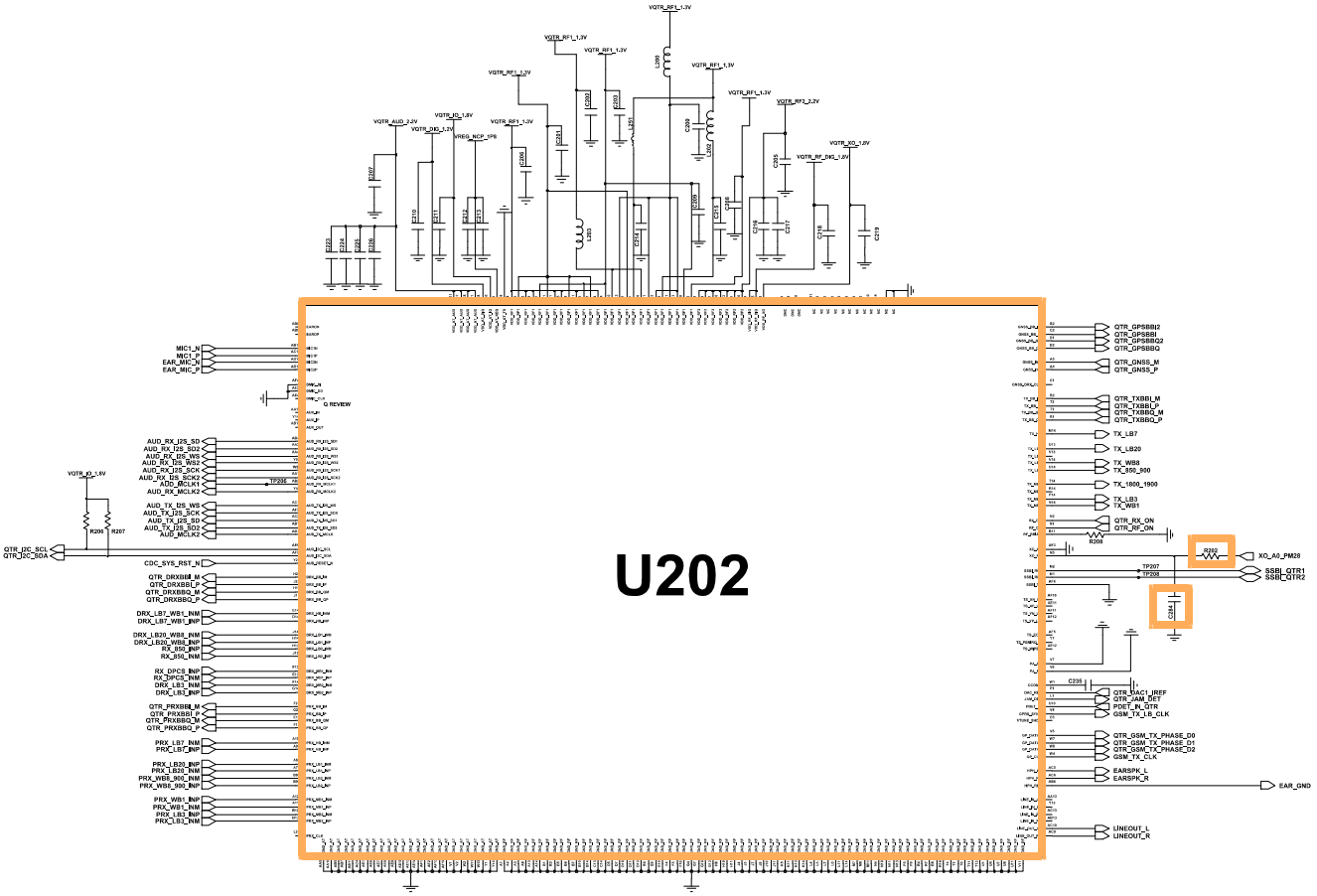
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-15. WCDMA Band1 RX



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

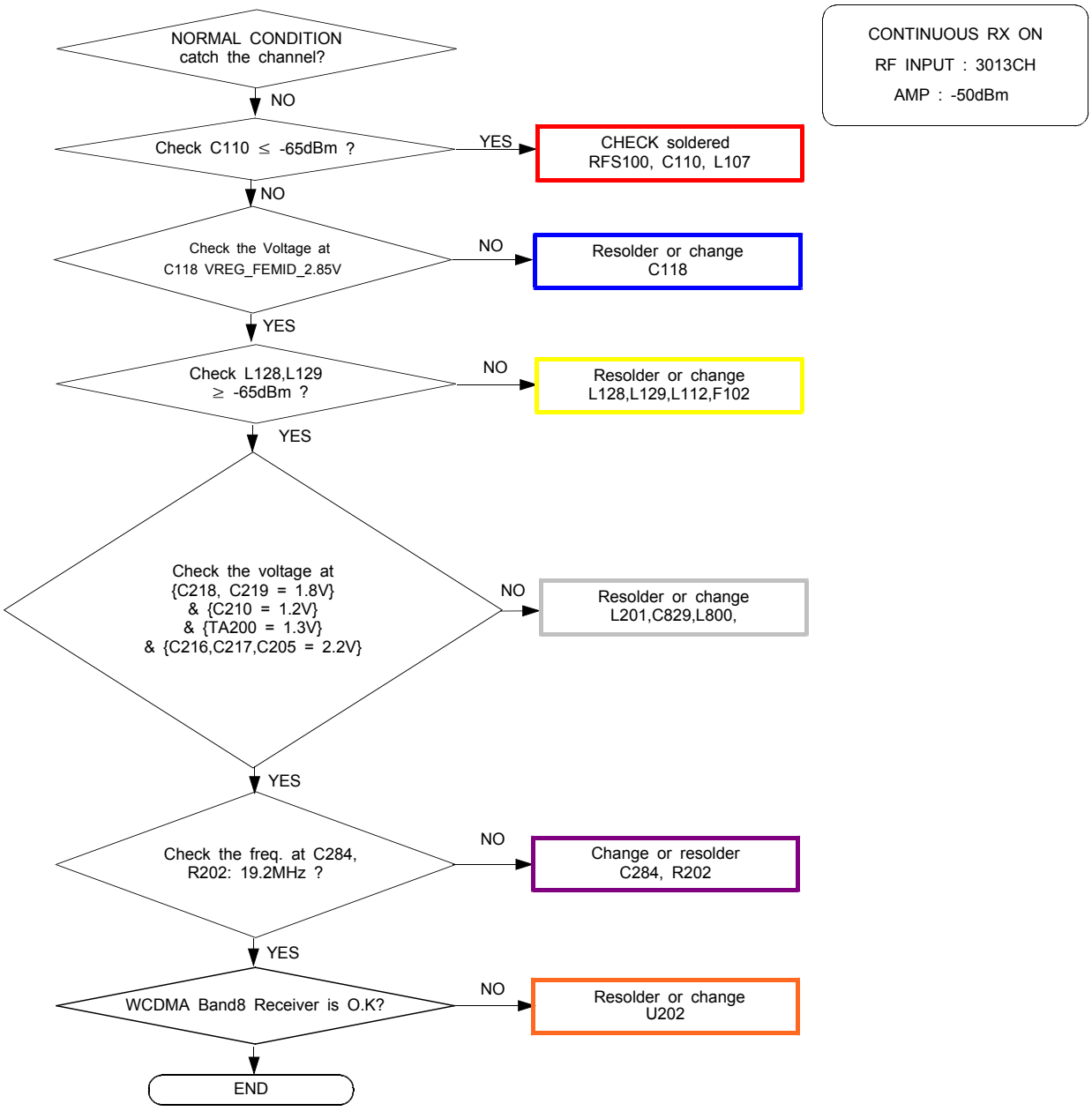




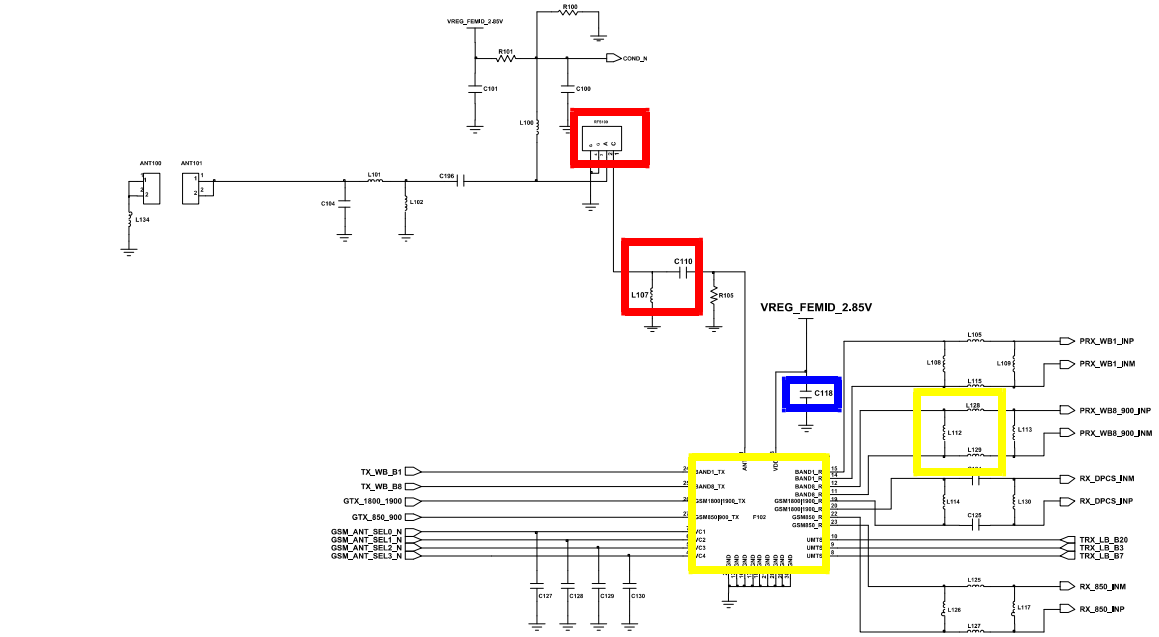
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

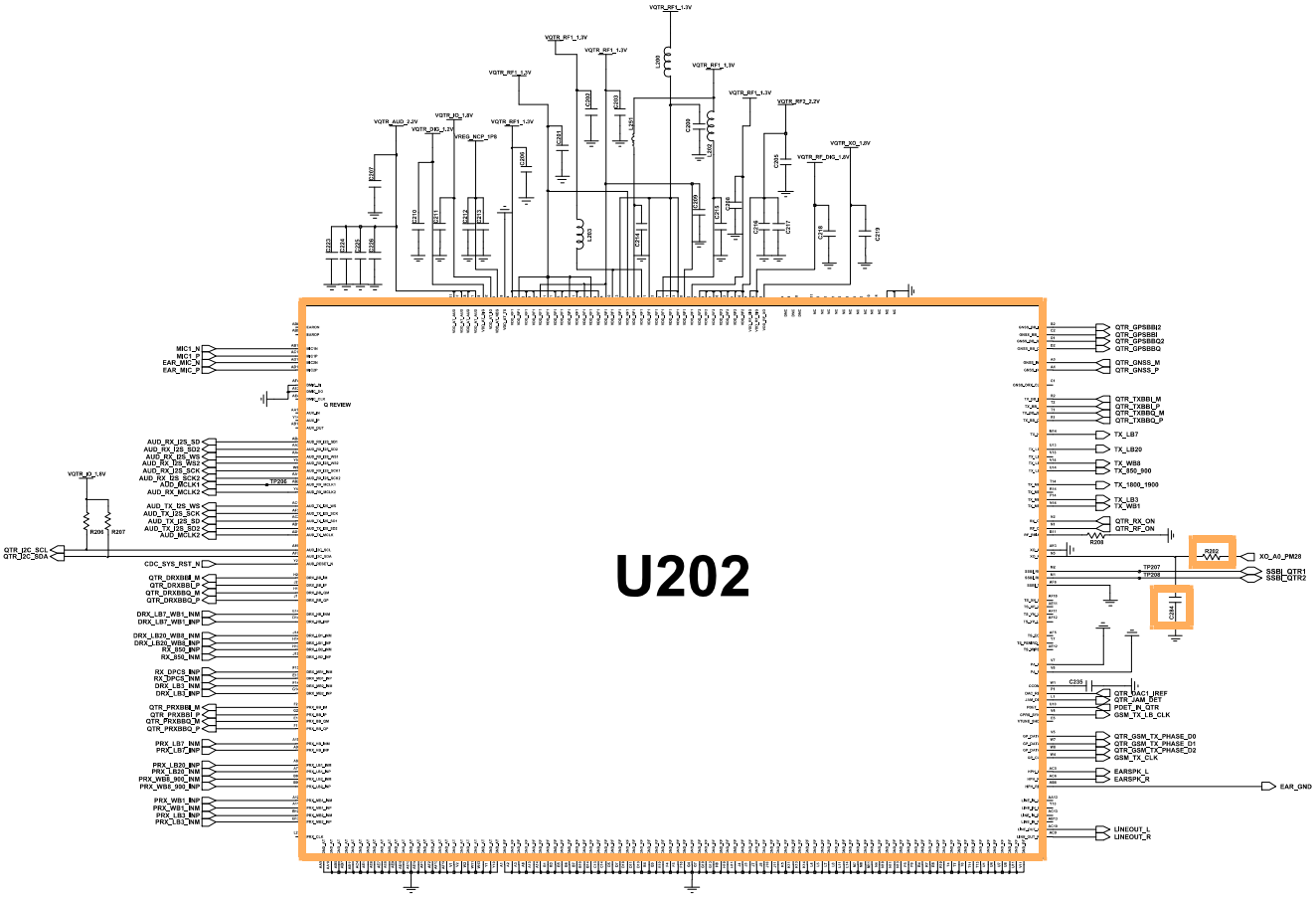
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-16. WCDMA Band8 RX



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

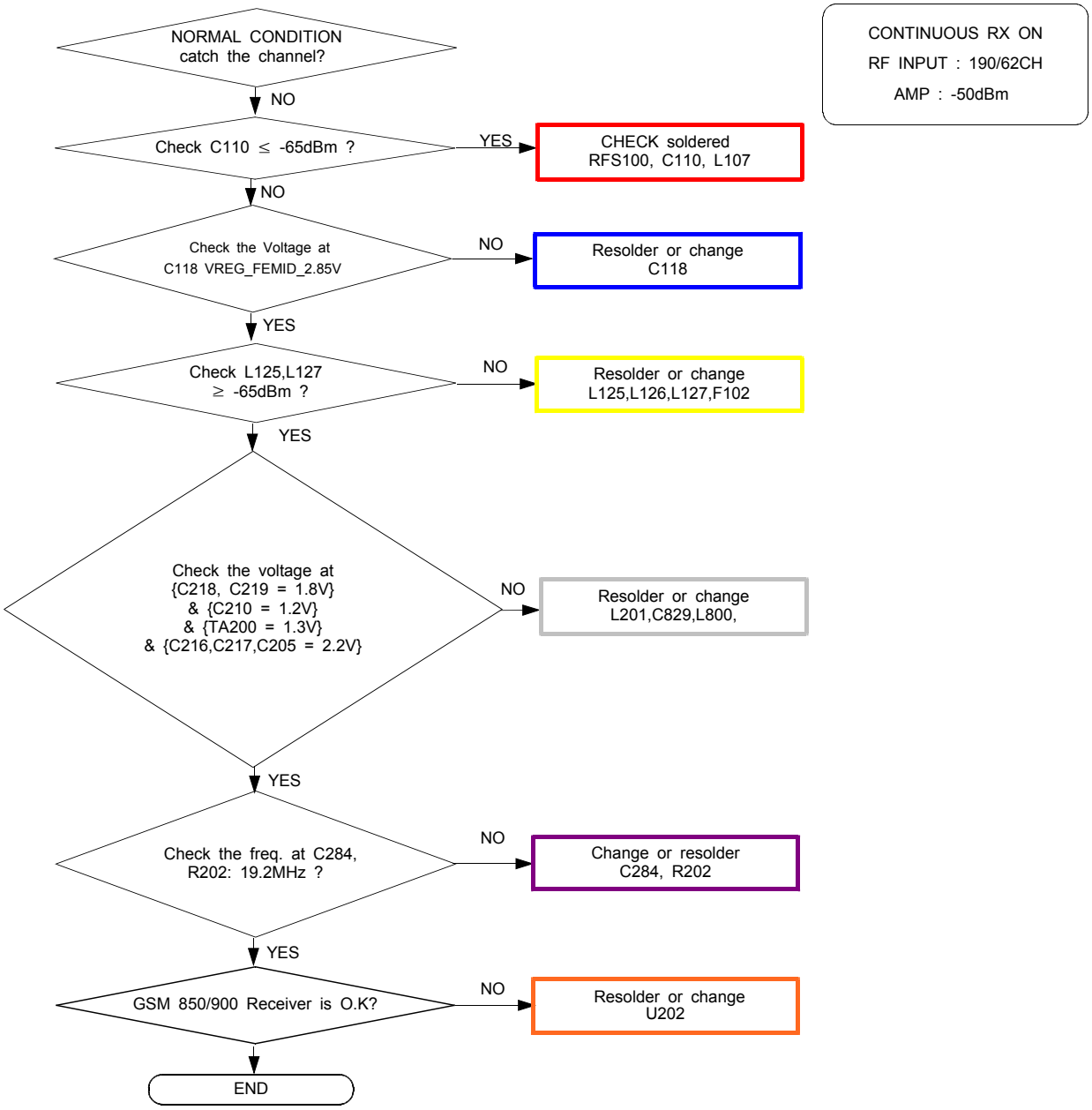




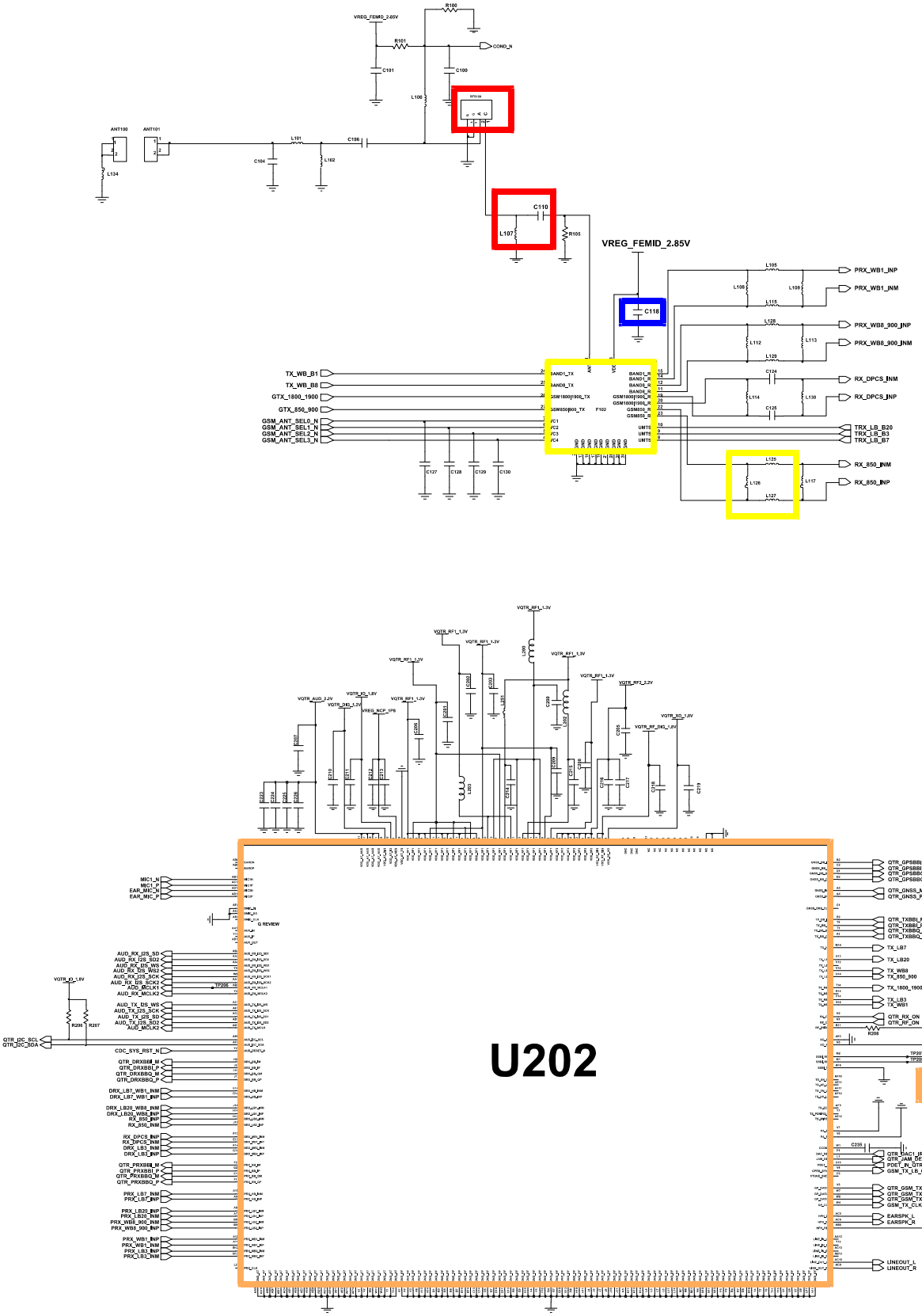
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-17. GSM 850/900 RX



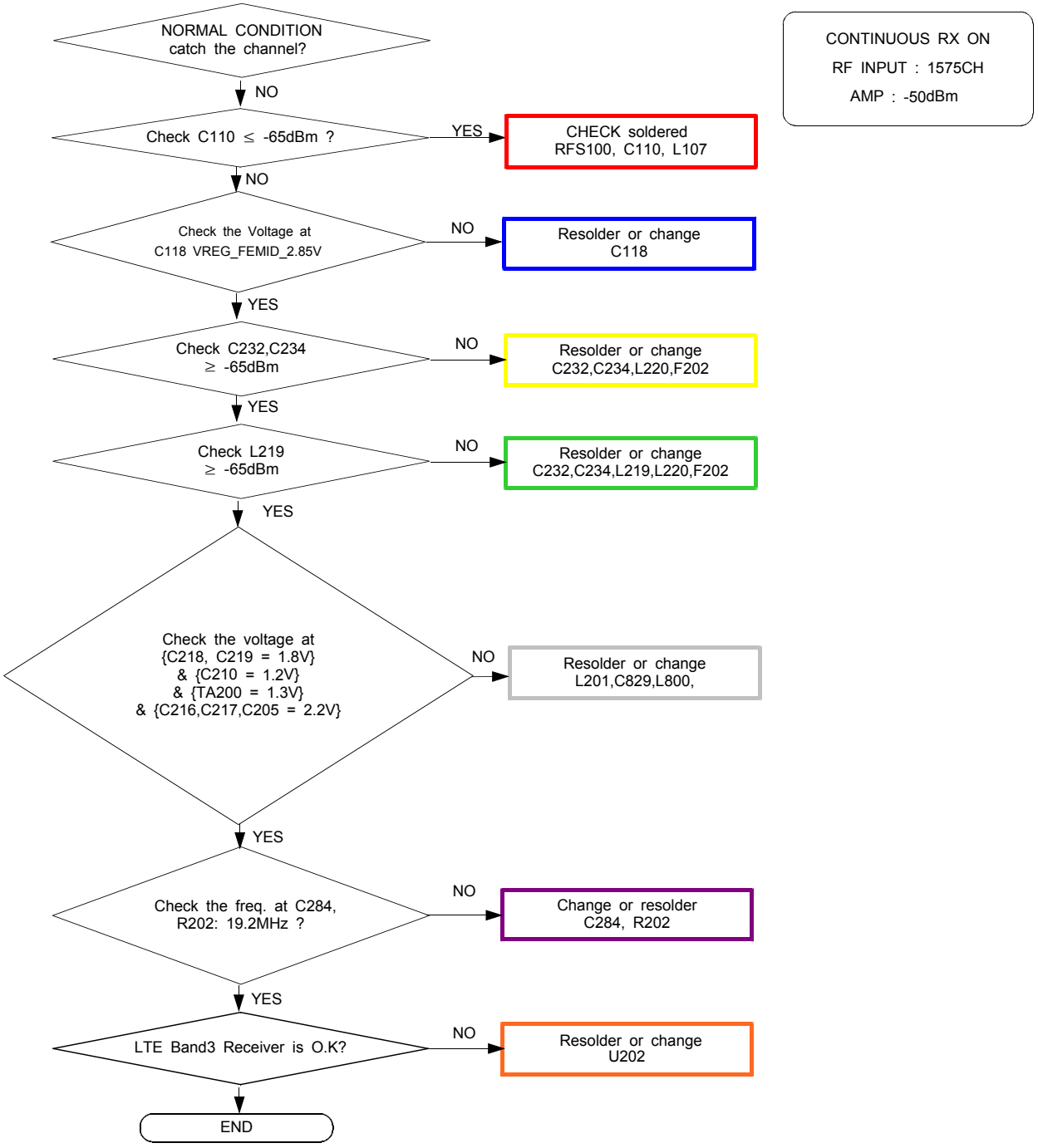
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



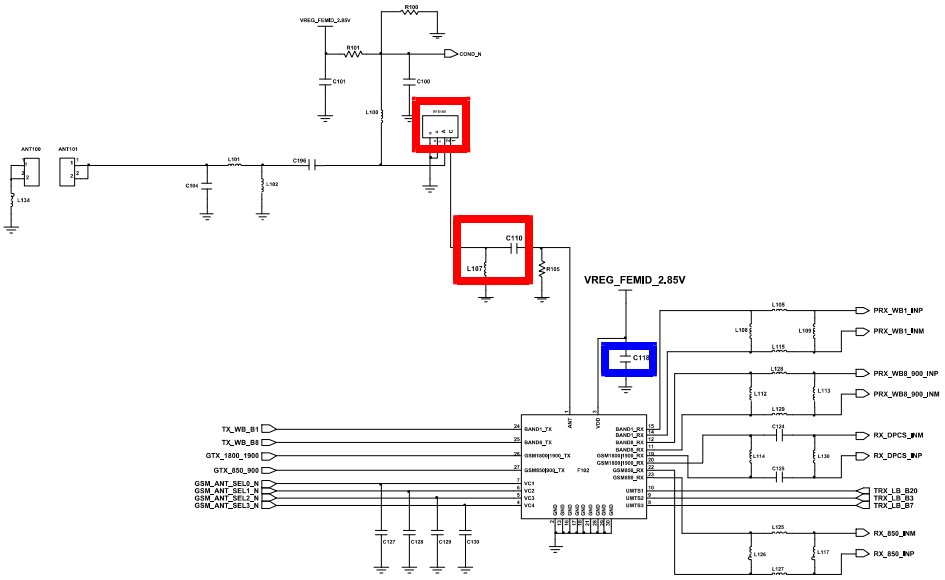
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

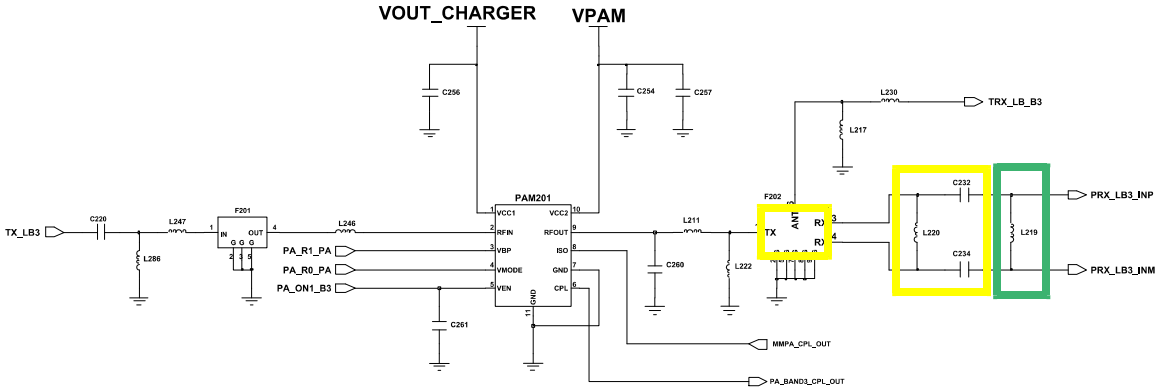
8-3-18. LTE BAND3 RX

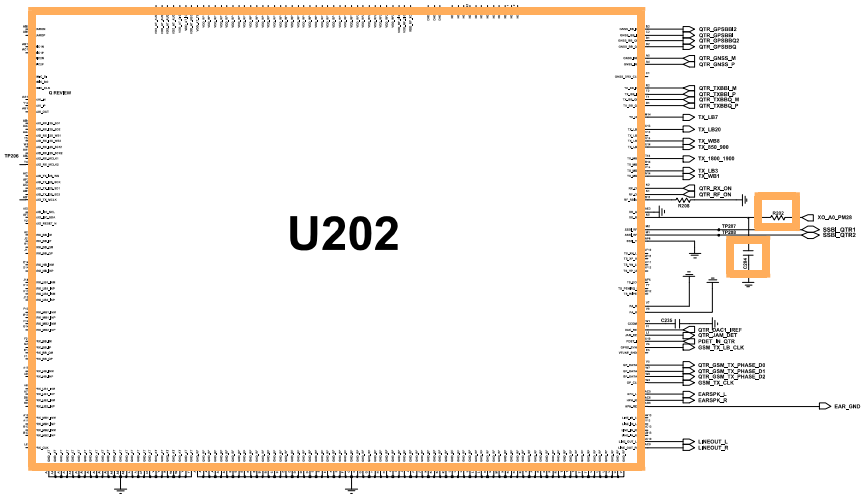


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



LTE B3

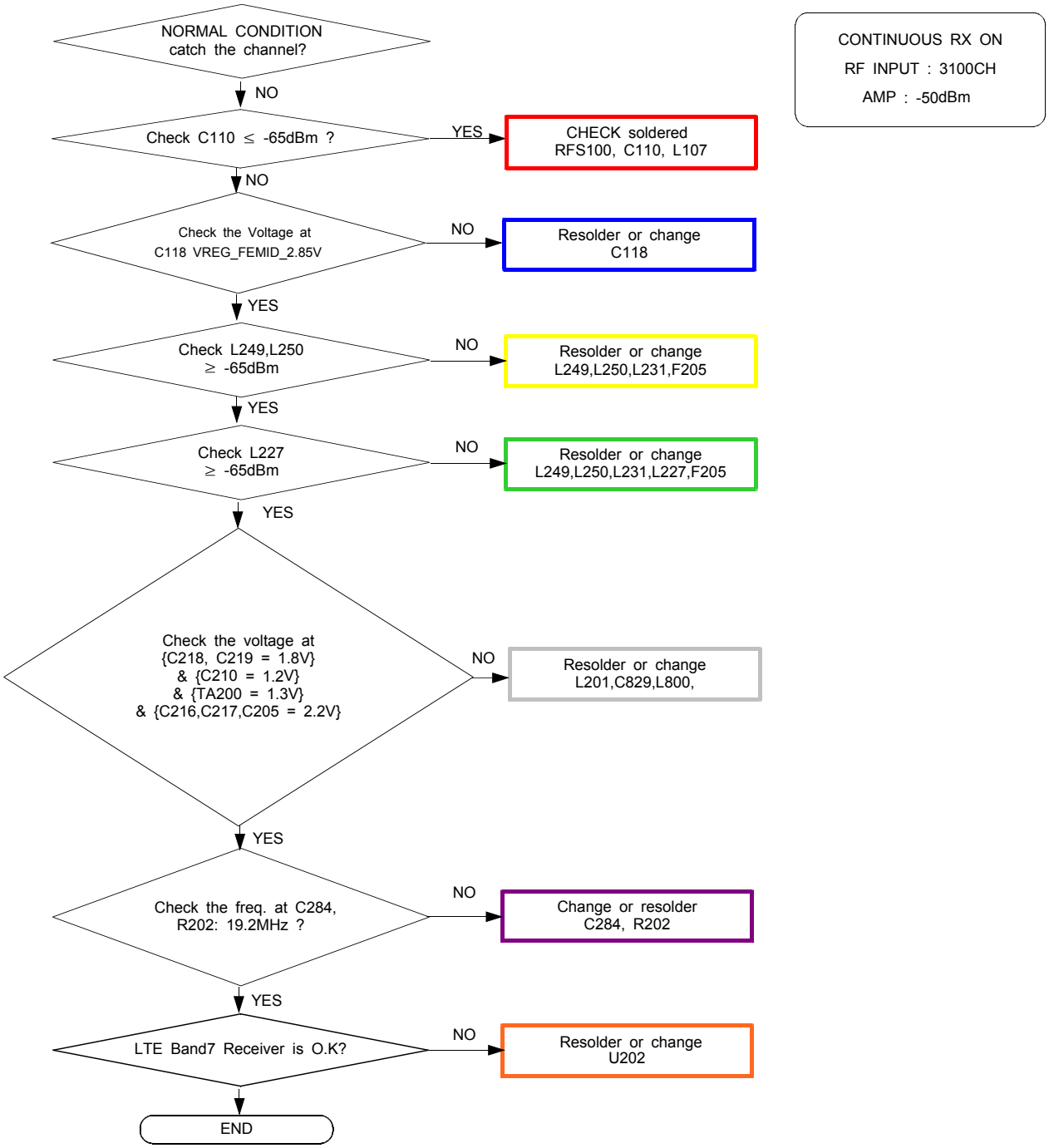




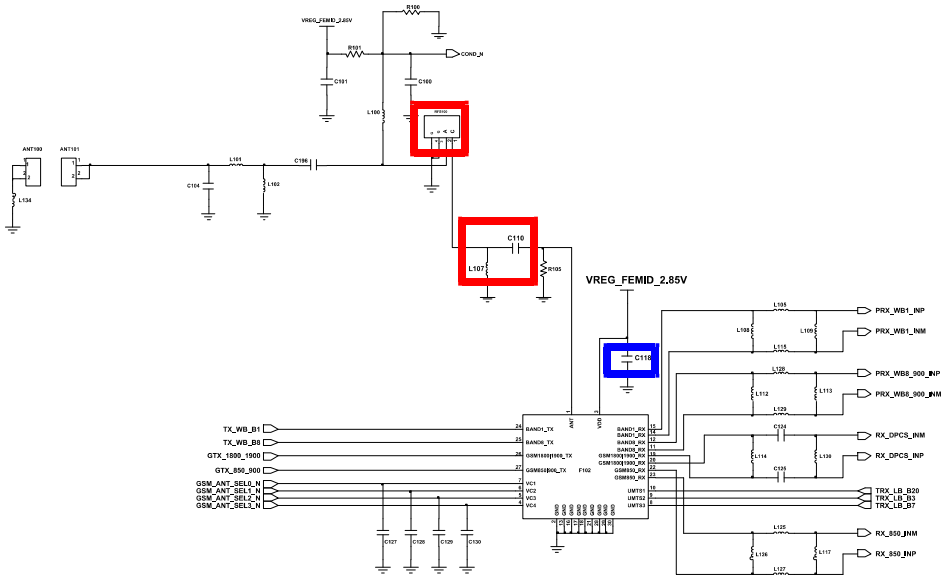
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

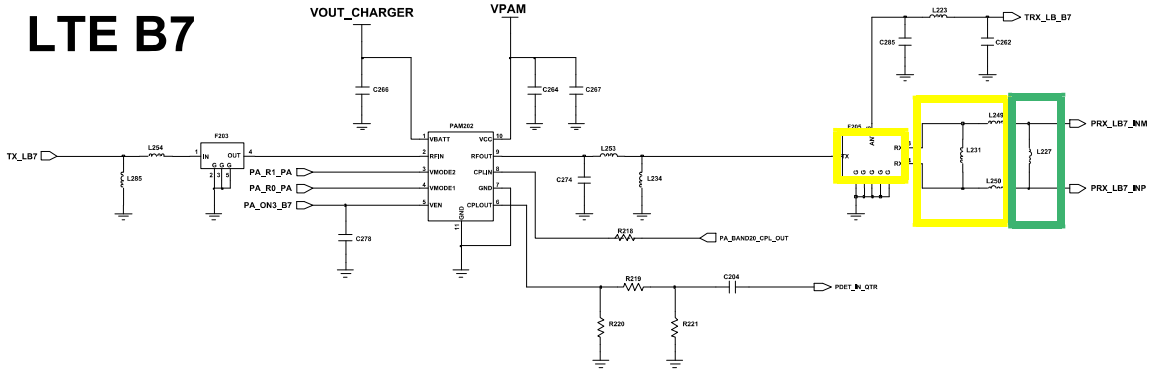
8-3-19. LTE BAND7 RX



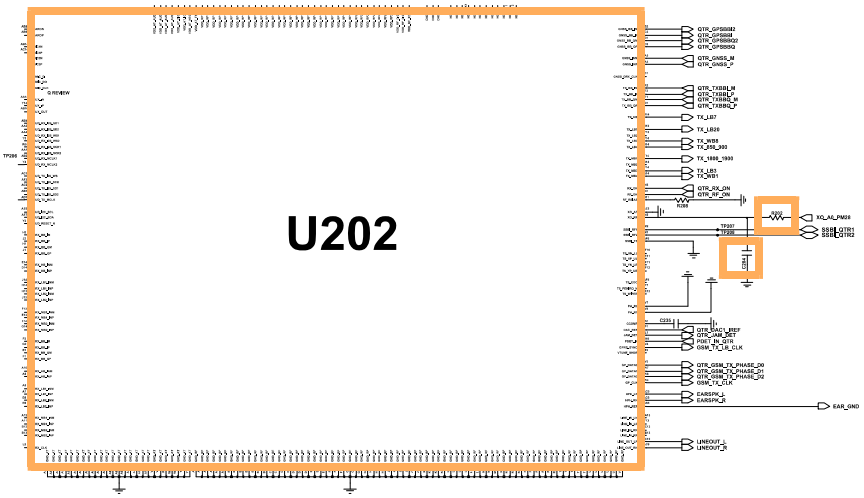
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



LTE B7



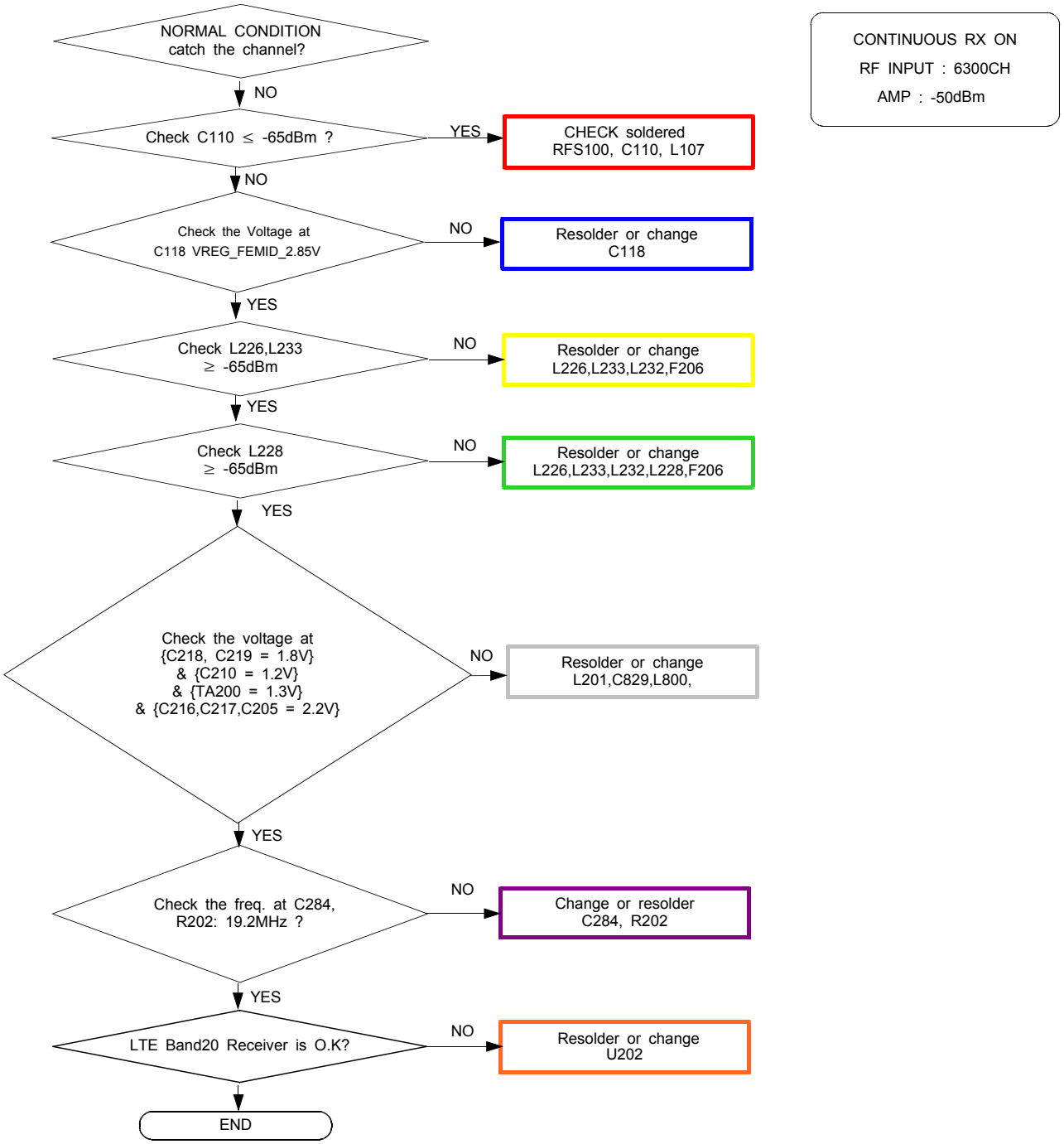
U202



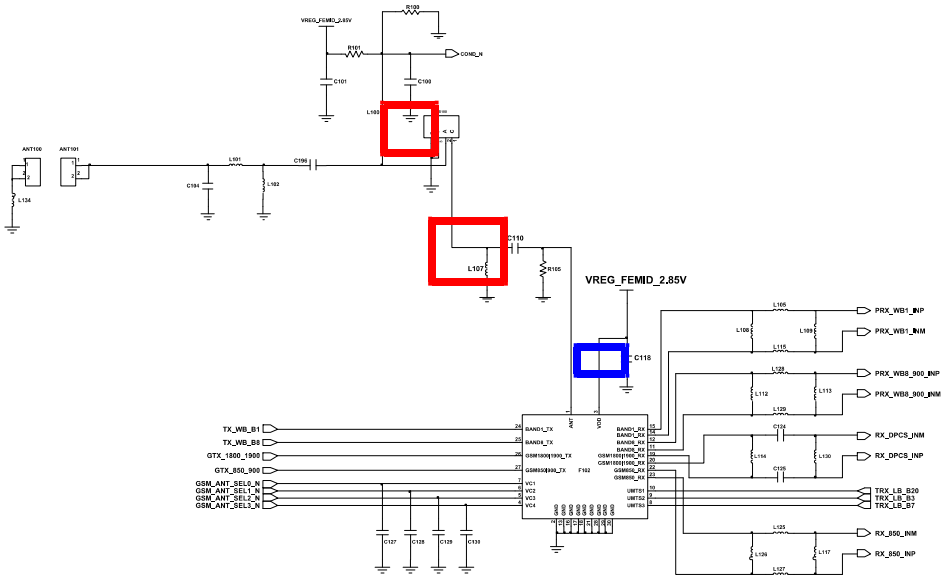
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

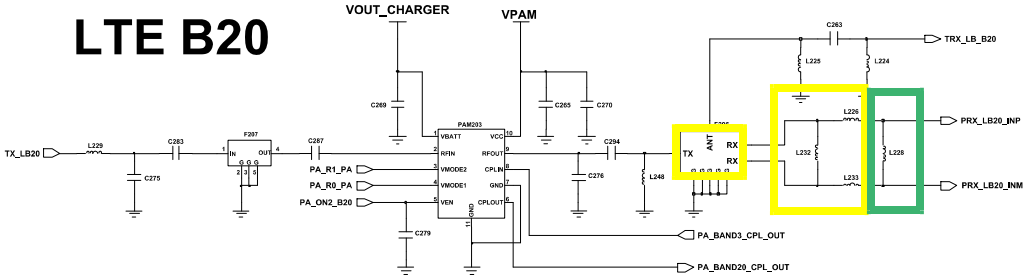
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

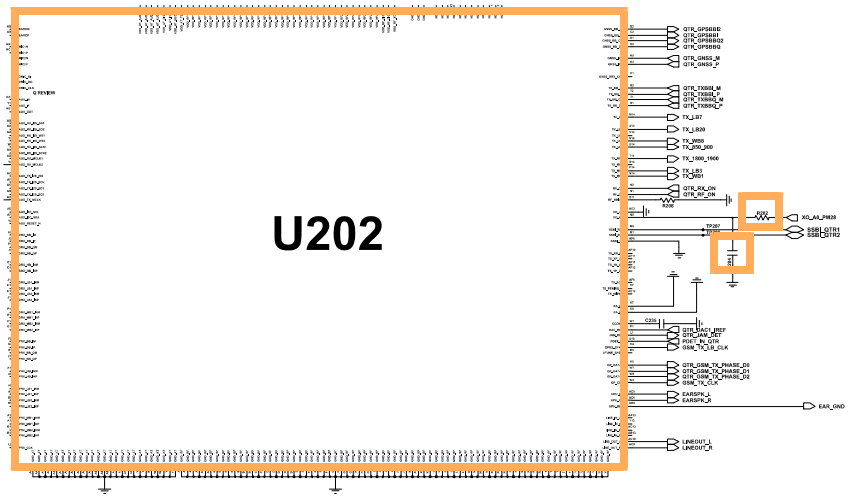
8-3-20. LTE BAND20 RX



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.





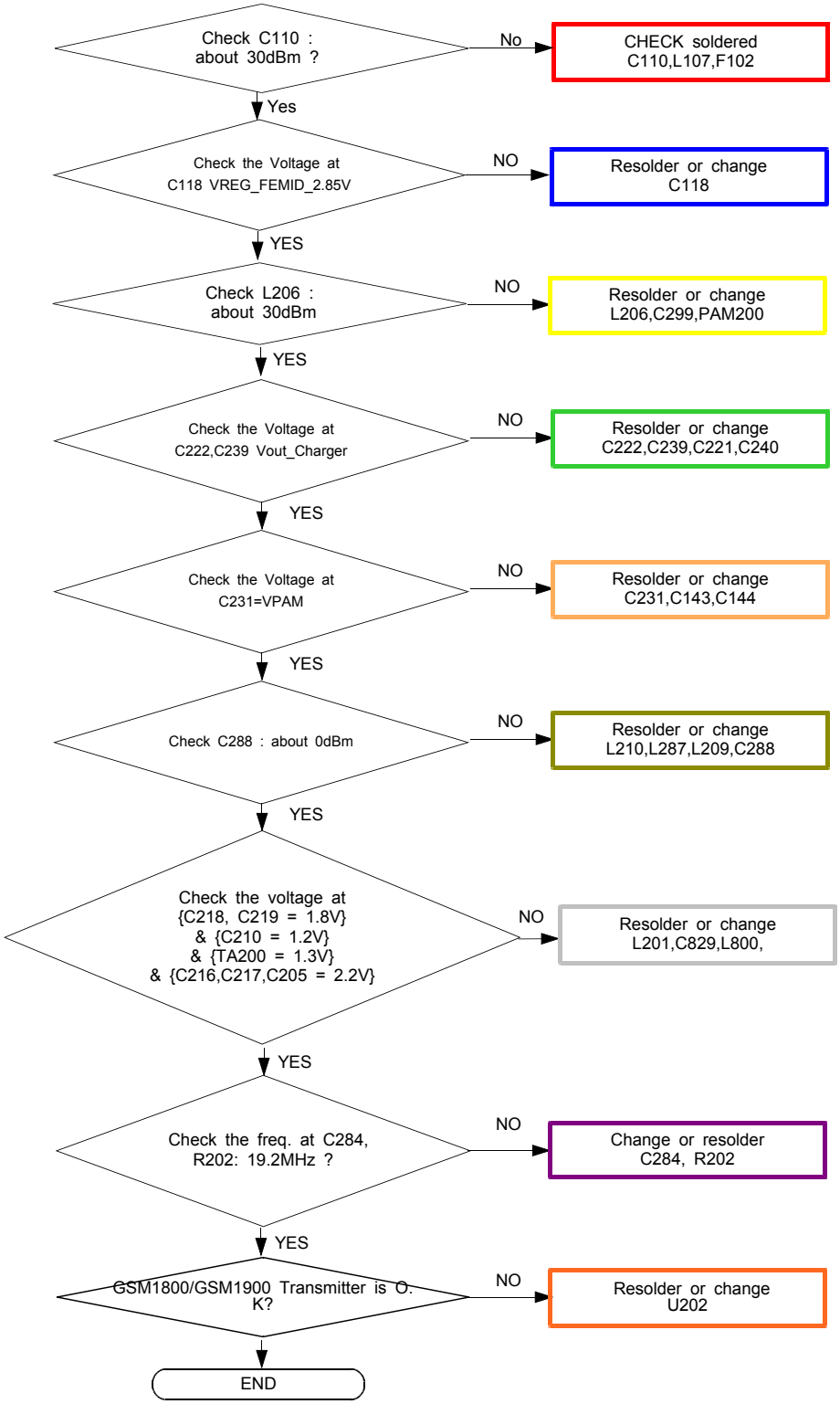


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

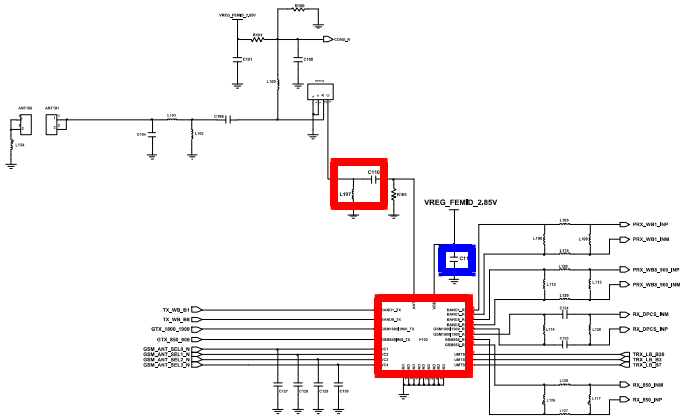
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

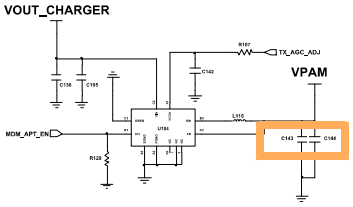
8-3-21. GSM1800/1900 TX

CONTINOUS TX ON CONDITION
TX POWER DAC:14500 CODE APPLIED
DCS CH : 698
PCS CH : 661
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB



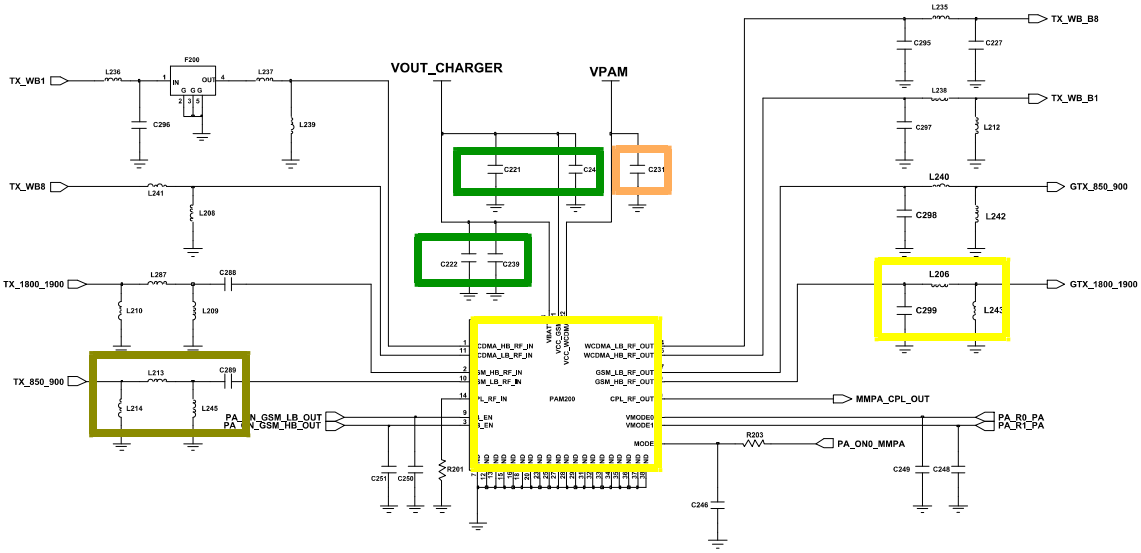
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

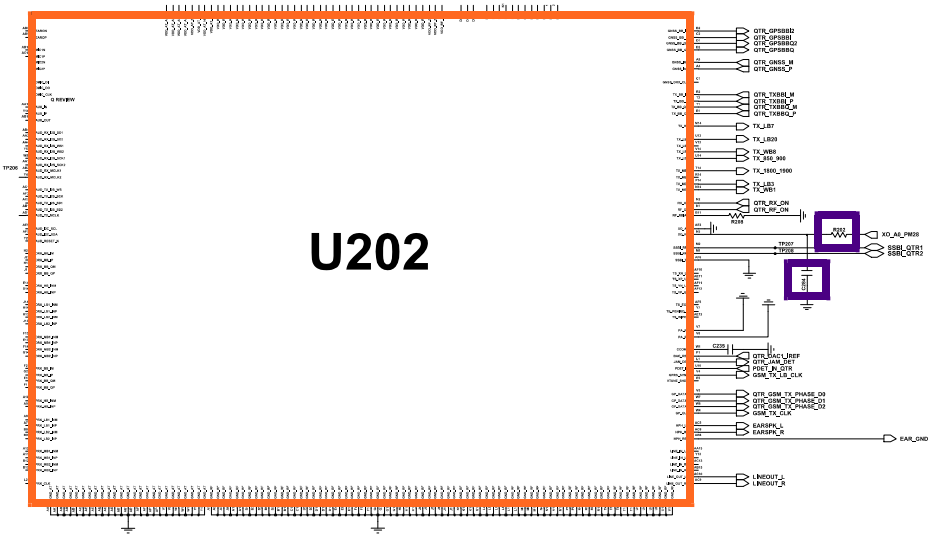




SMPS for VPAM

SWITCH(MAIN)

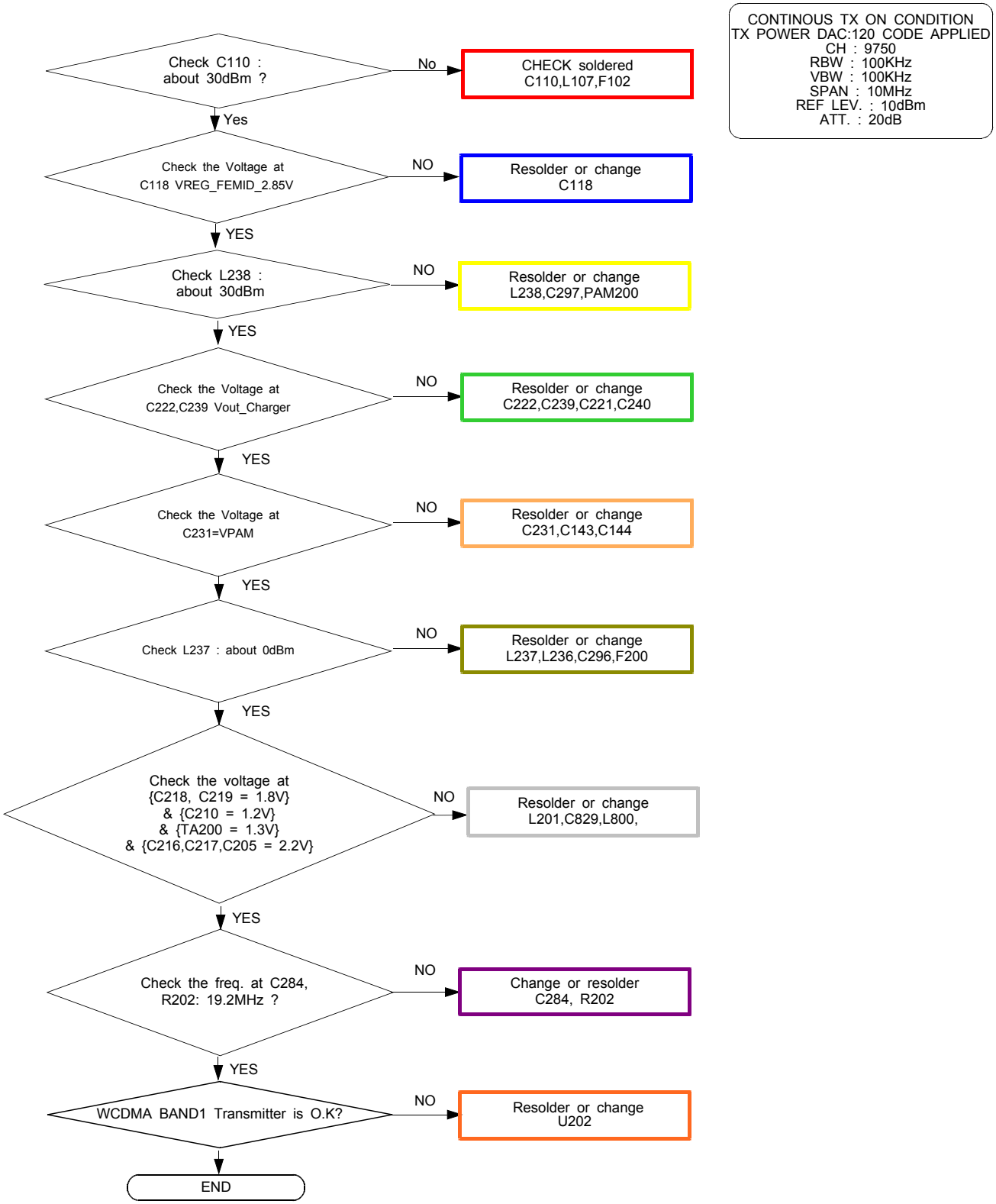




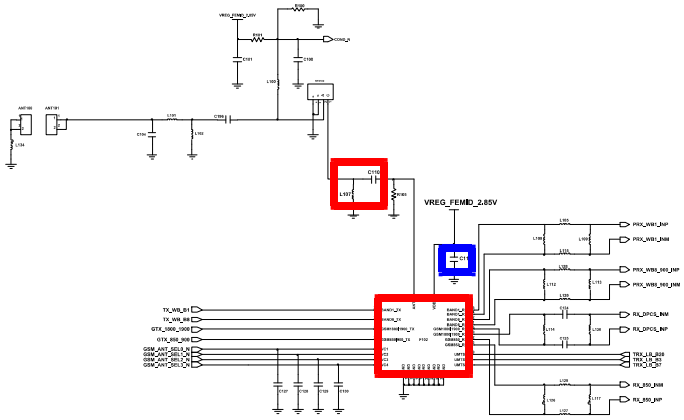
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

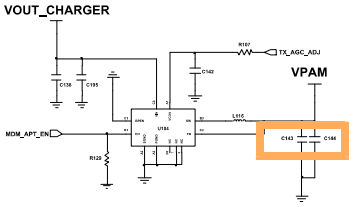
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-22. WCDMA BAND1 TX



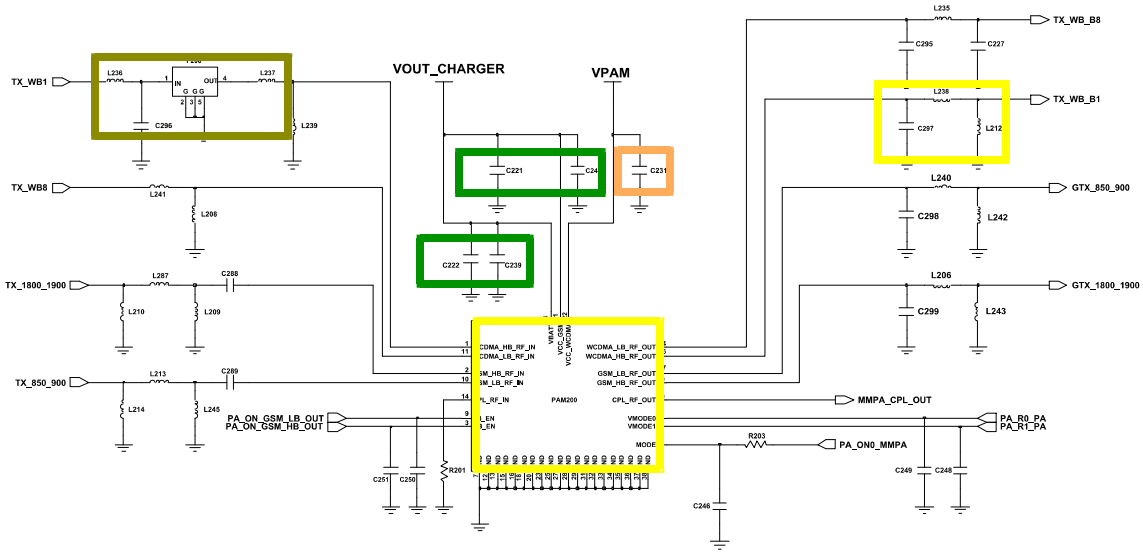
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

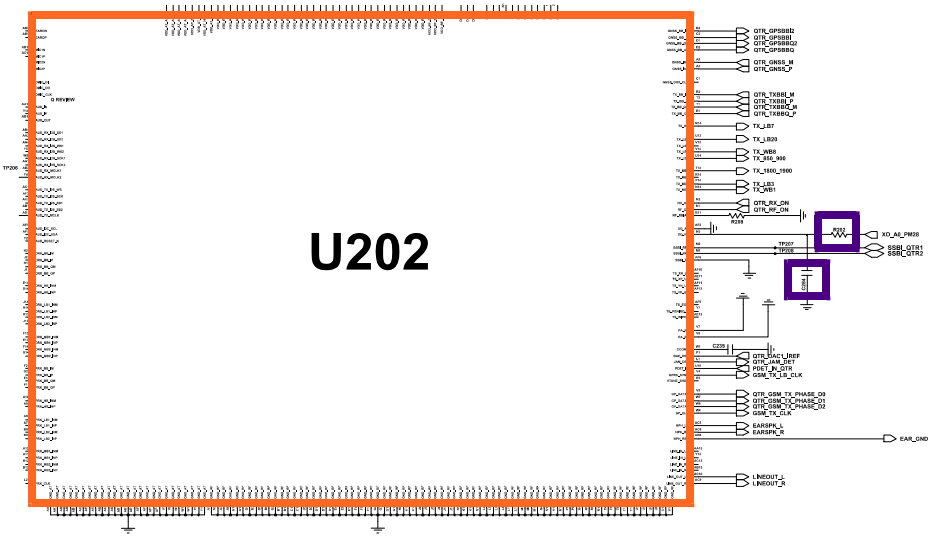




SMPS for VPAM

SWITCH(MAIN)



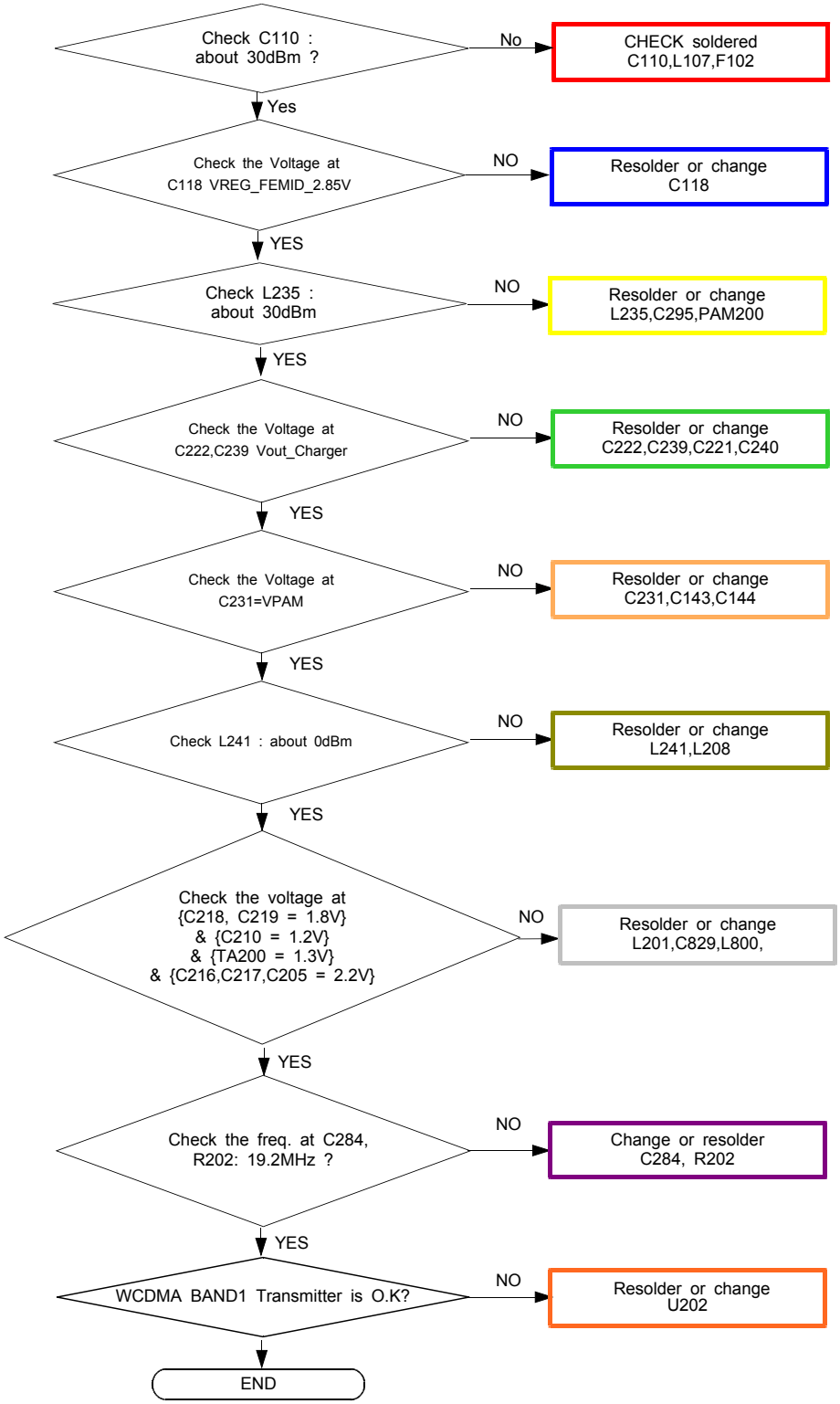


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

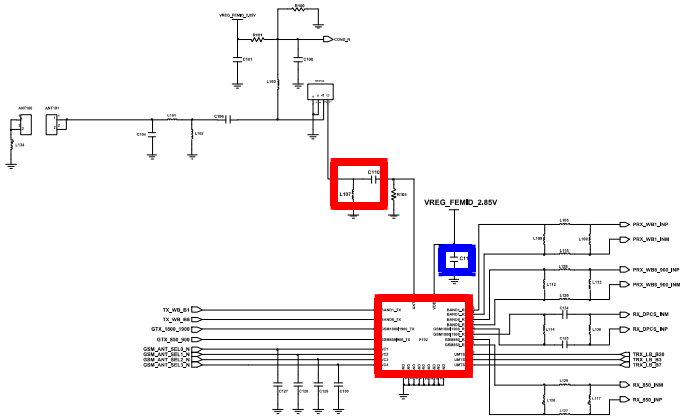
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

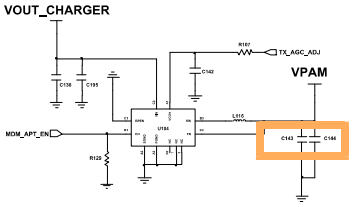
8-3-23. WCDMA BAND8 TX

CONTINOUS TX ON CONDITION
TX POWER DAC:120 CODE APPLIED
CH : 2788
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB



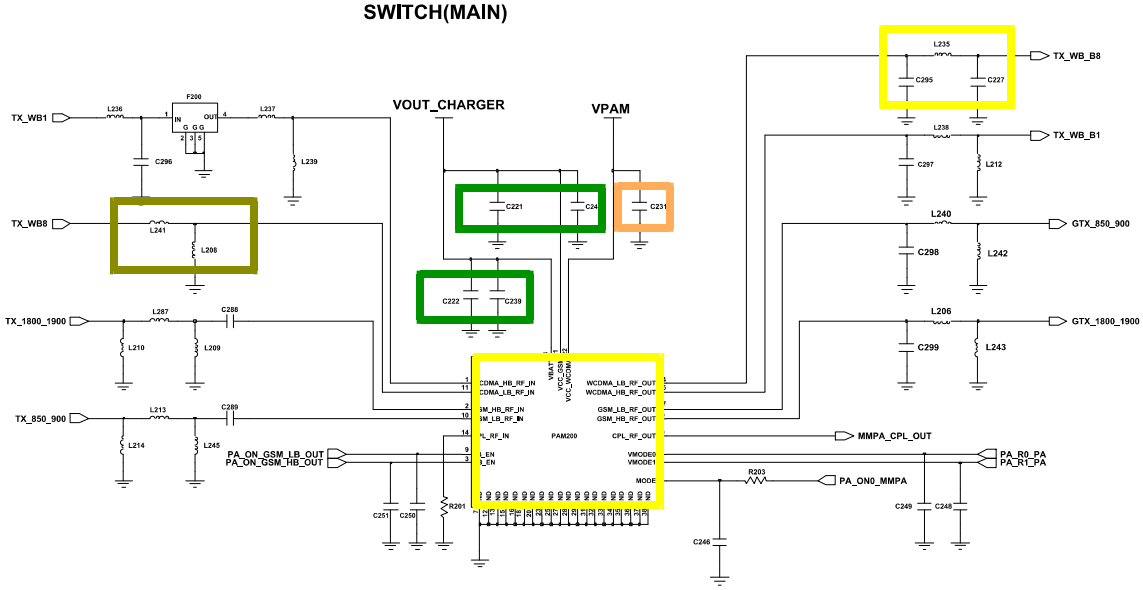
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

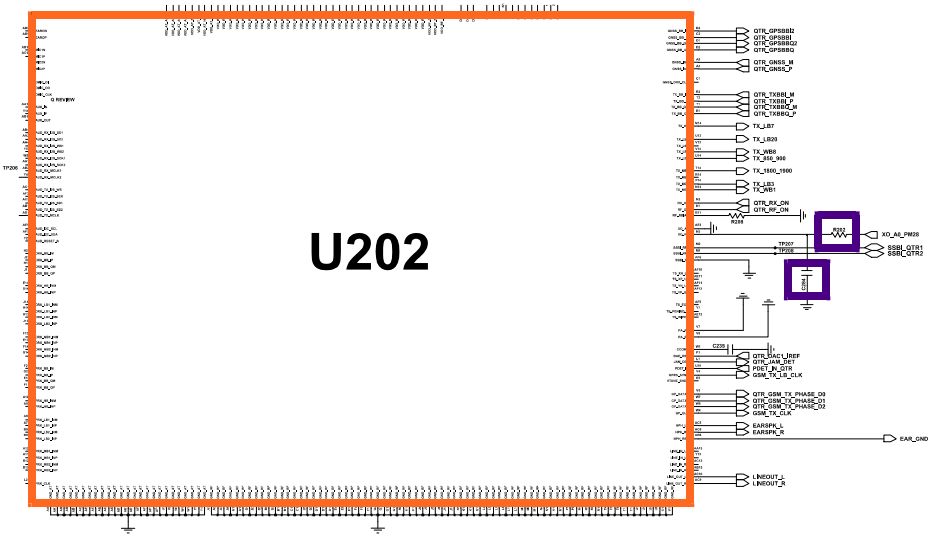




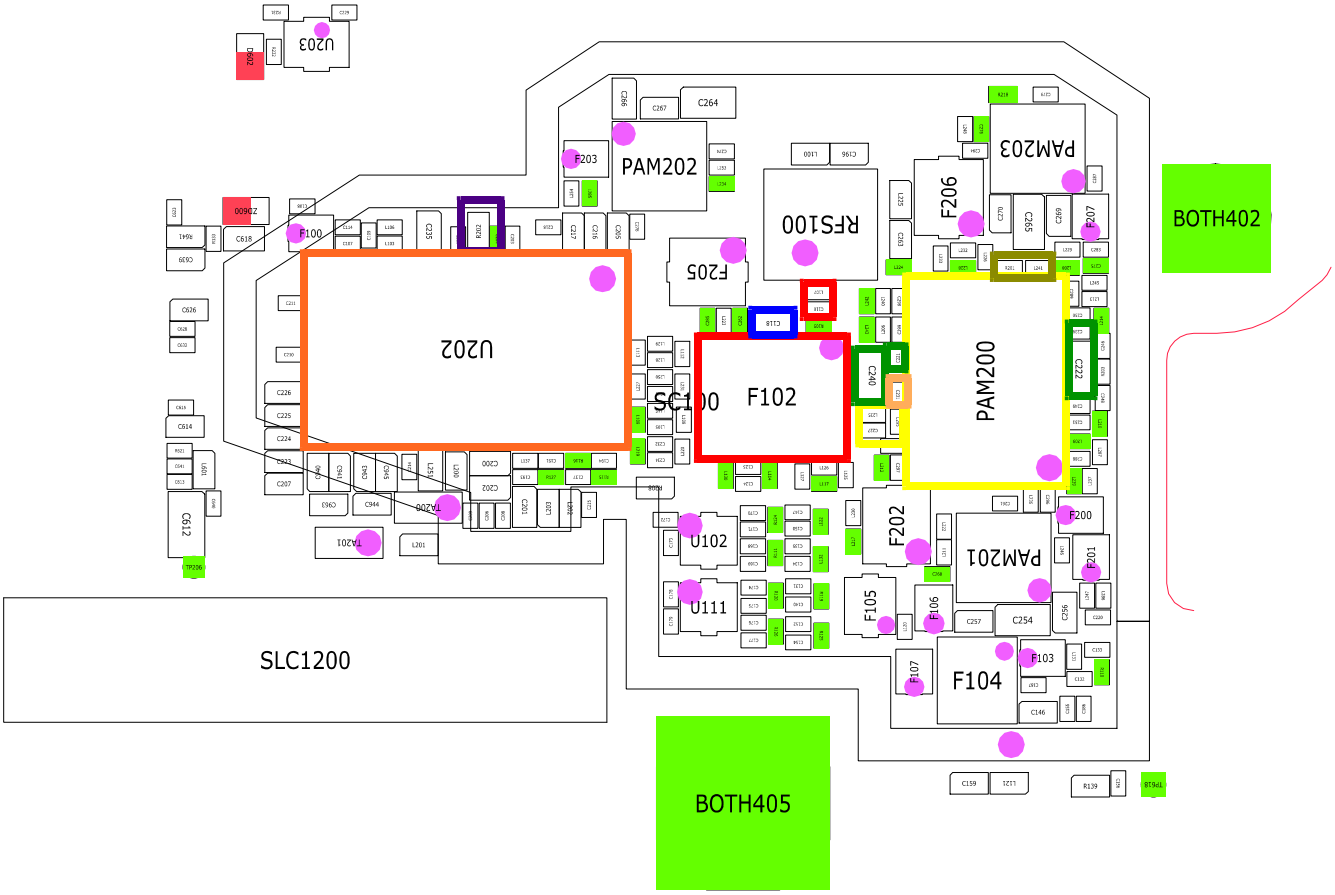
SMPS for VPAM

SWITCH(MAIN)



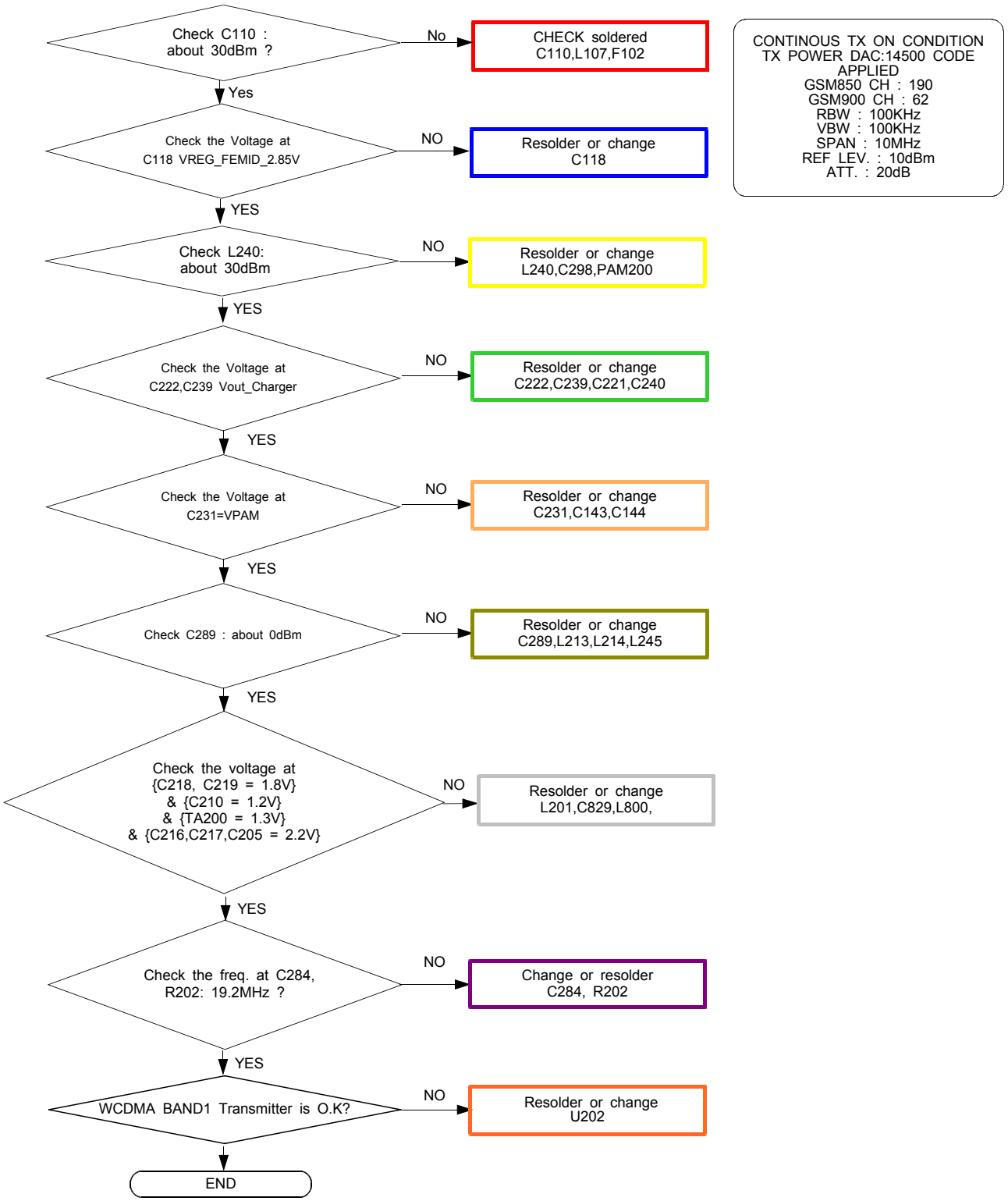


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

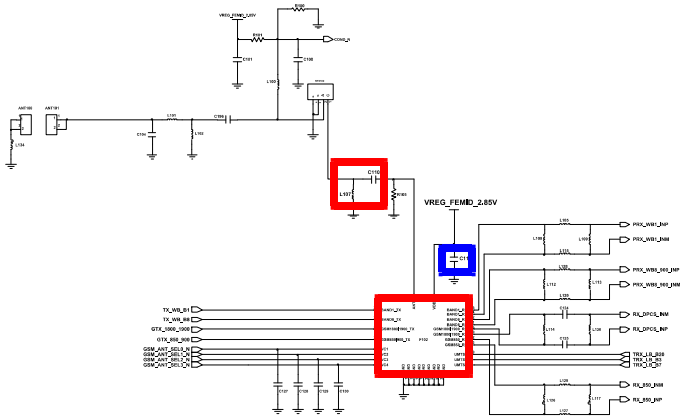


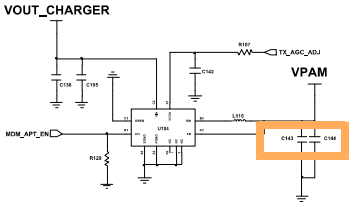
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-24. GSM850/GSM900 TX



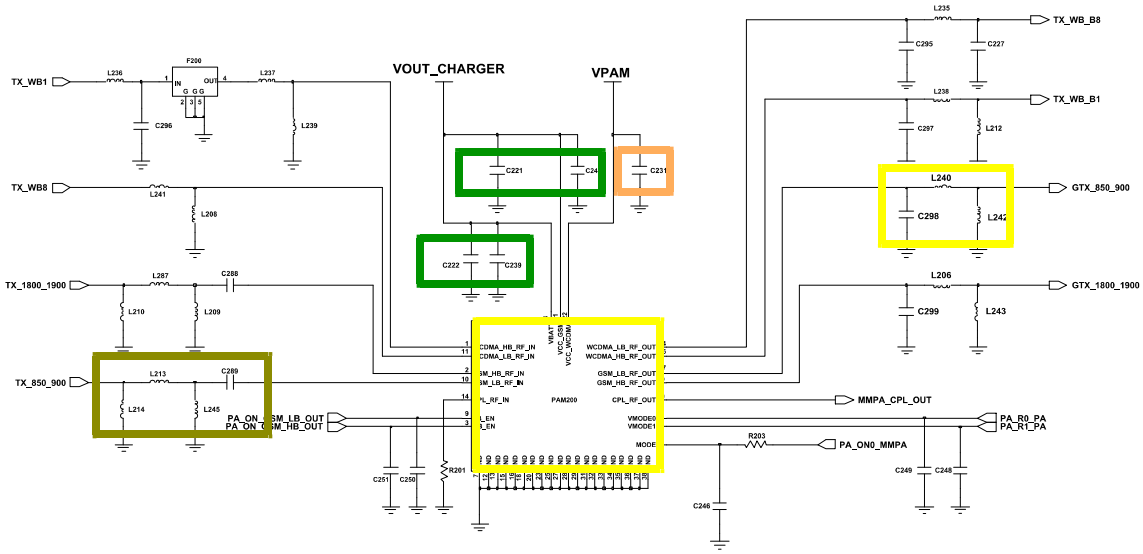
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

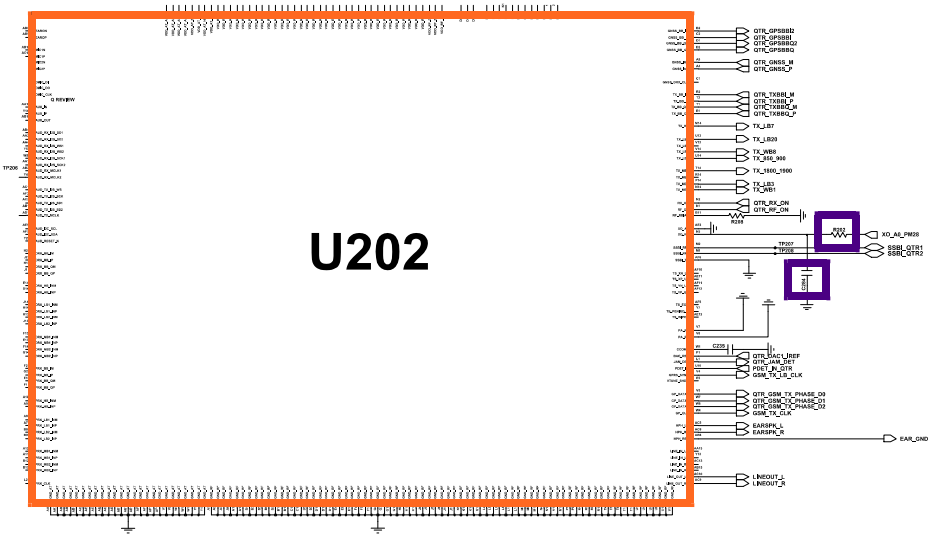




SMPS for VPAM

SWITCH(MAIN)



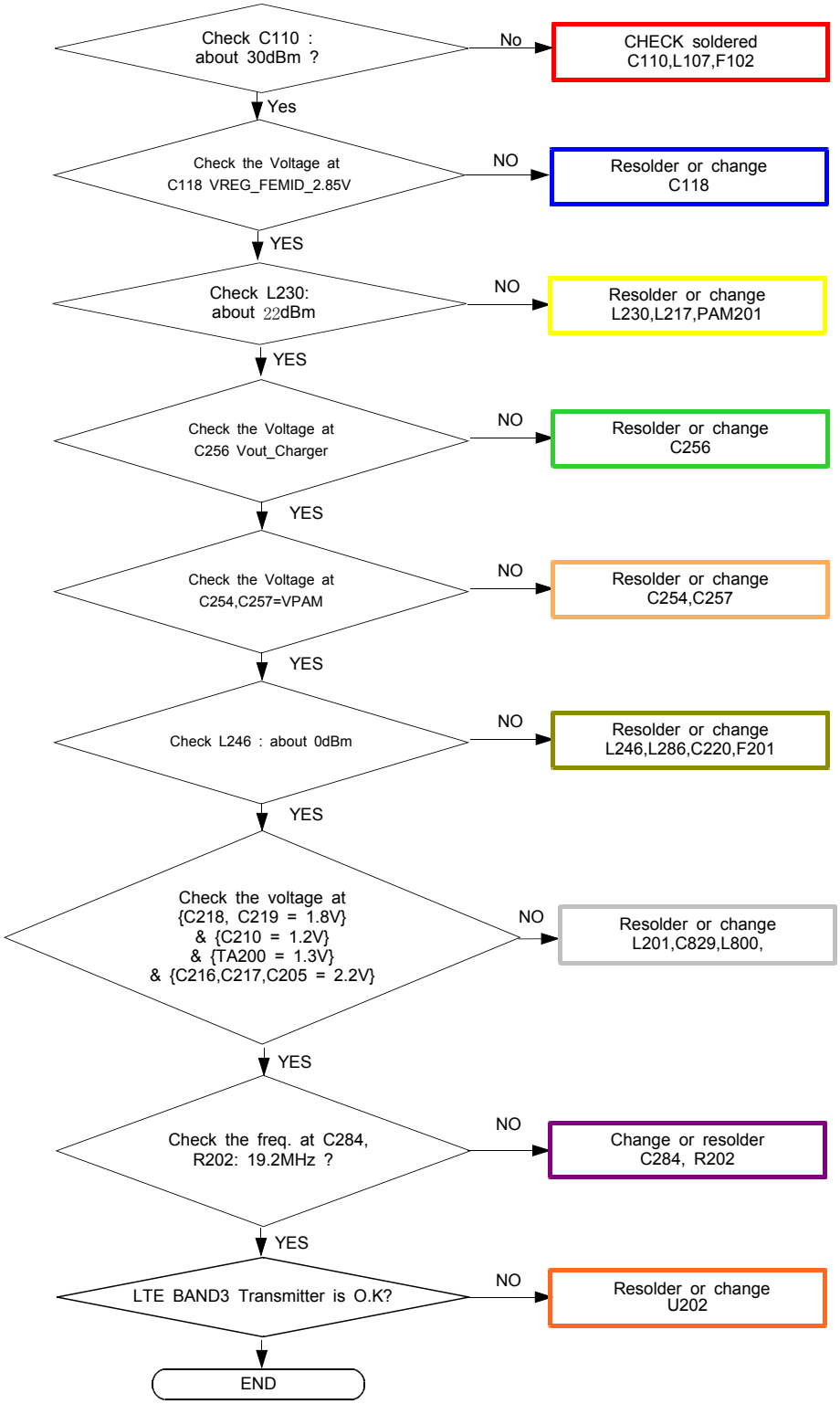


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

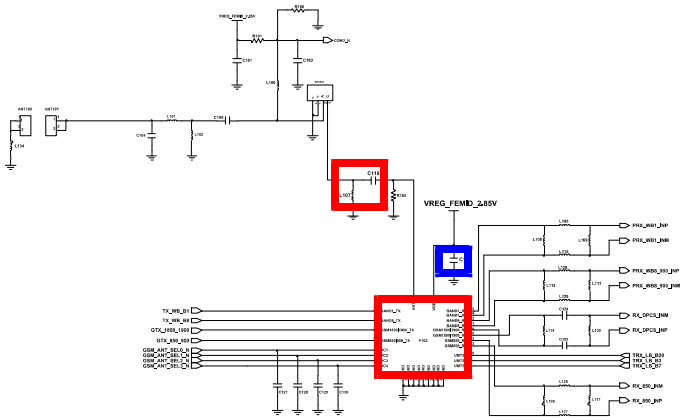
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-25. LTE BAND3 TX

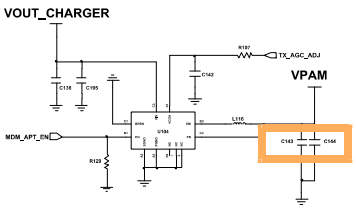
CONTINOUS TX ON CONDITION
TX POWER DAC:120 CODE APPLIED
CH : 19575
RBW : 100KHz
VBW : 100KHz
SPAN : 40MHz
REF LEV. : 10dBm
ATT. : 20dB



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

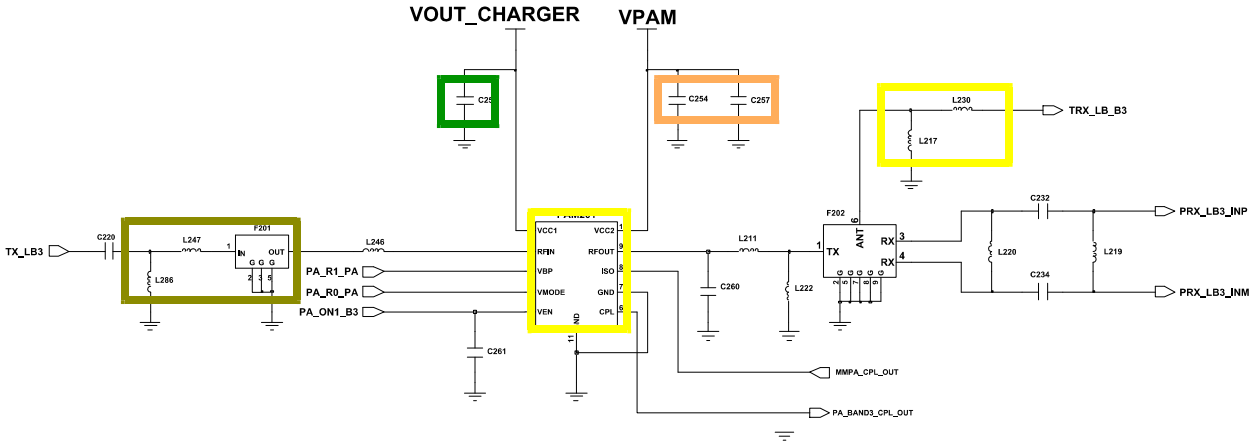


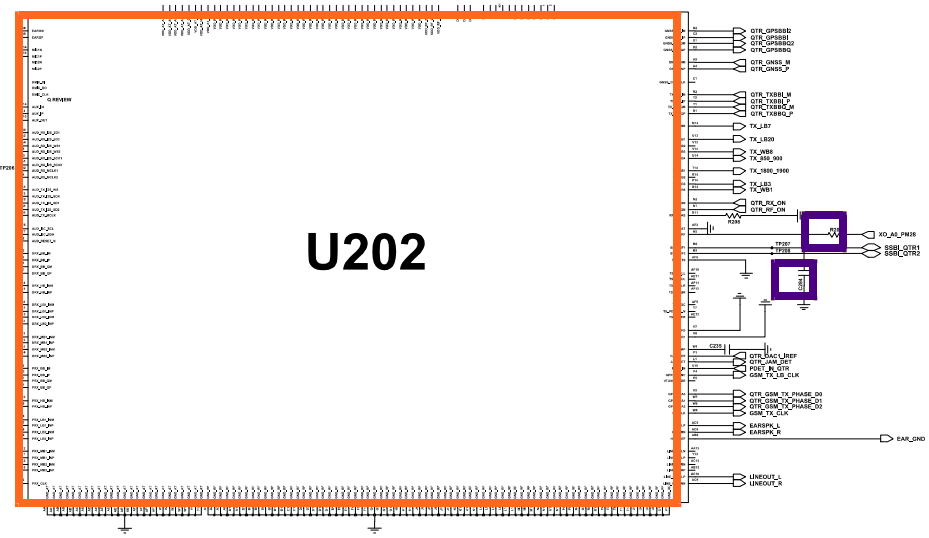
SWITCH(MAIN)



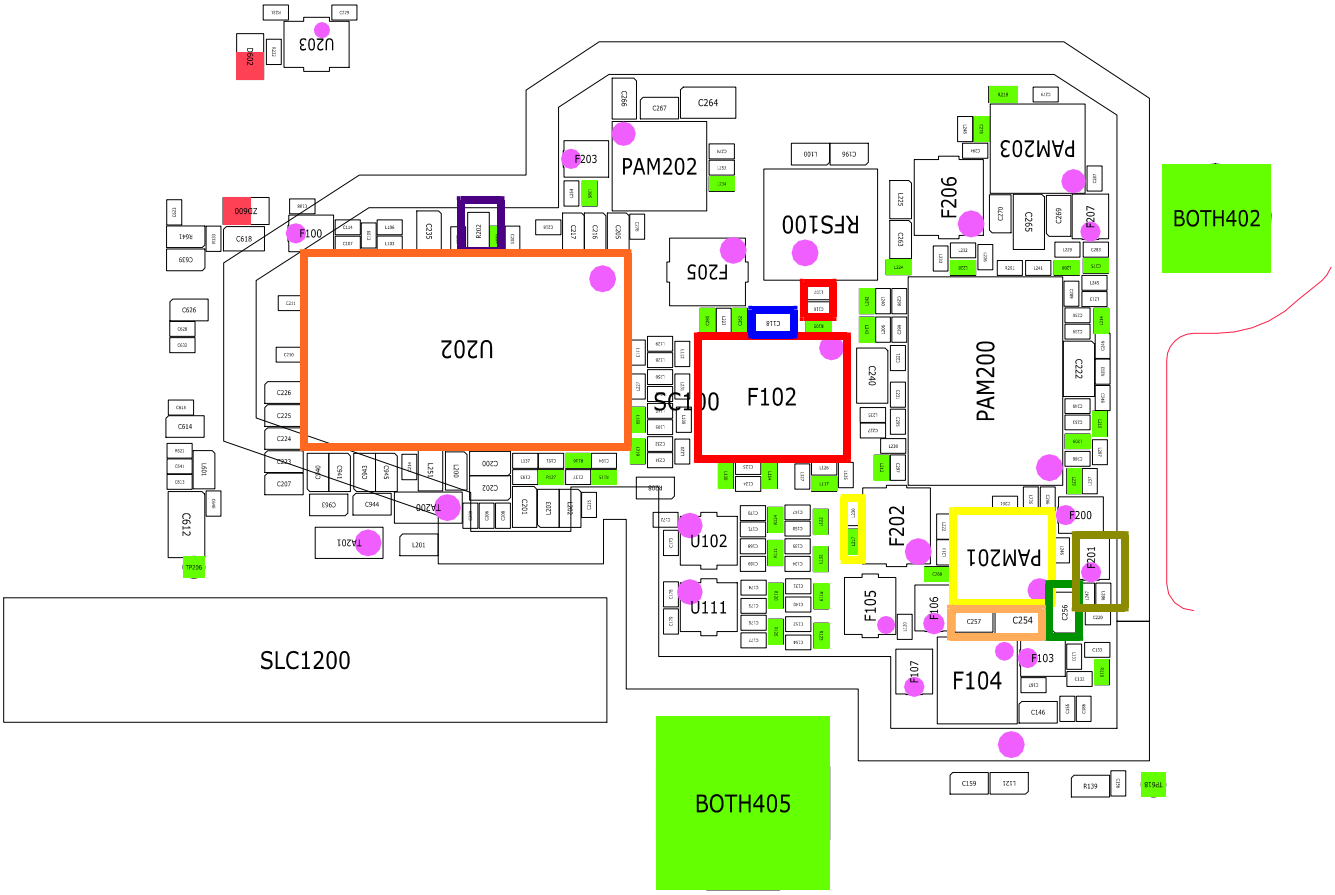
SMPS for VPAM

LTE B3



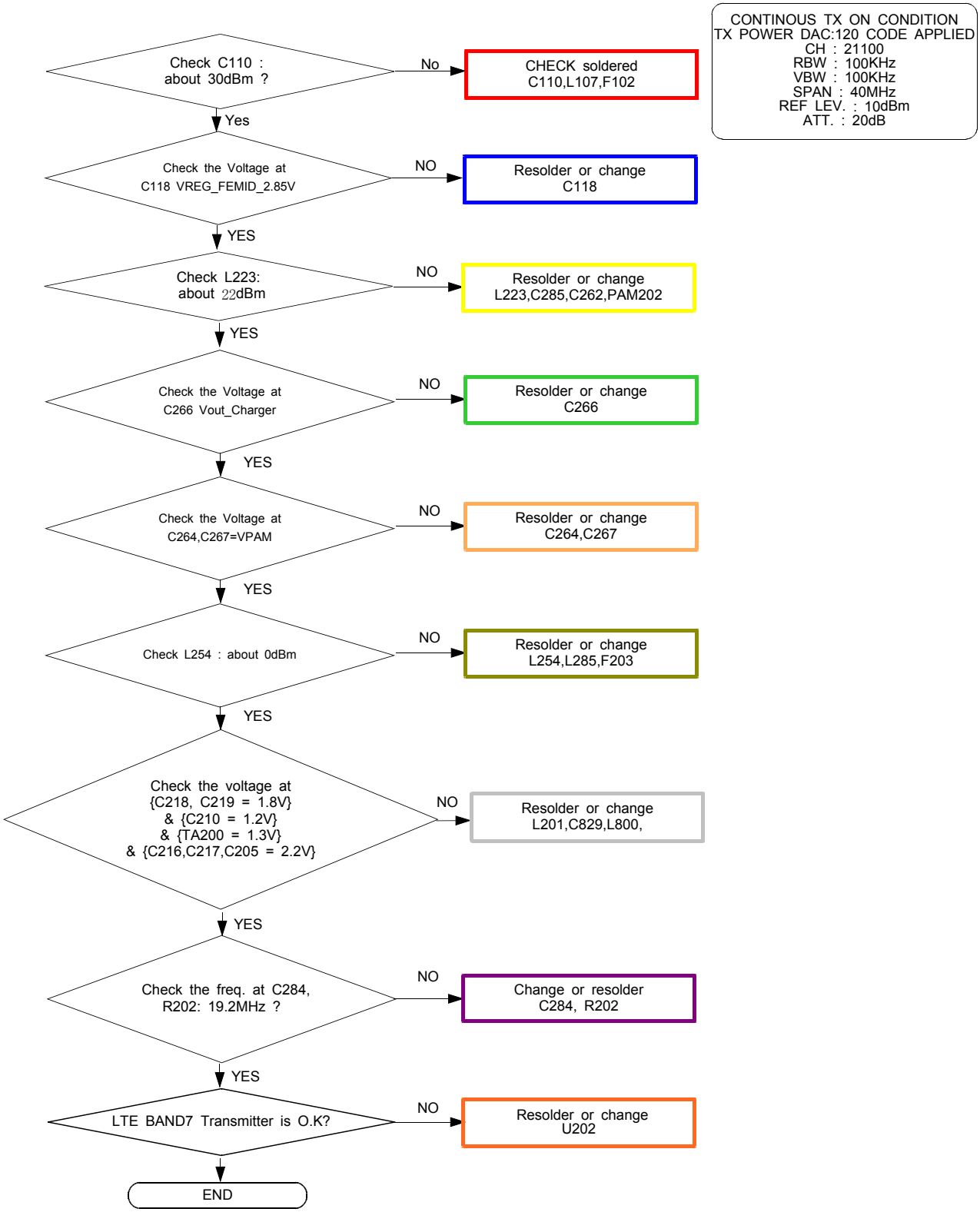


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

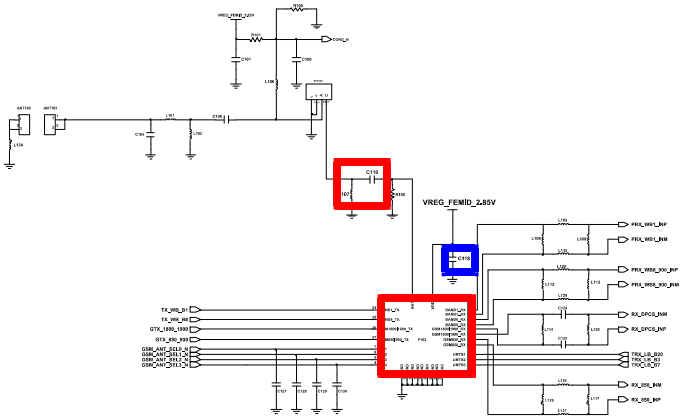


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

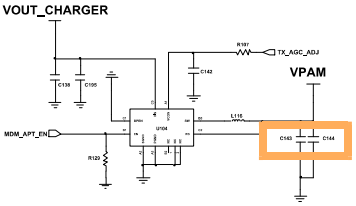
8-3-25. LTE BAND7 TX



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

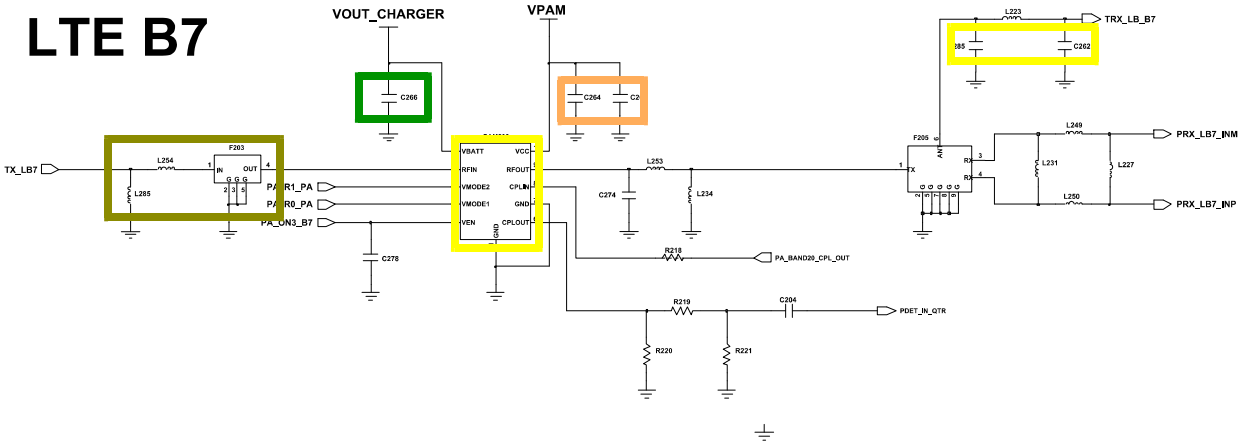


SWITCH(MAIN)

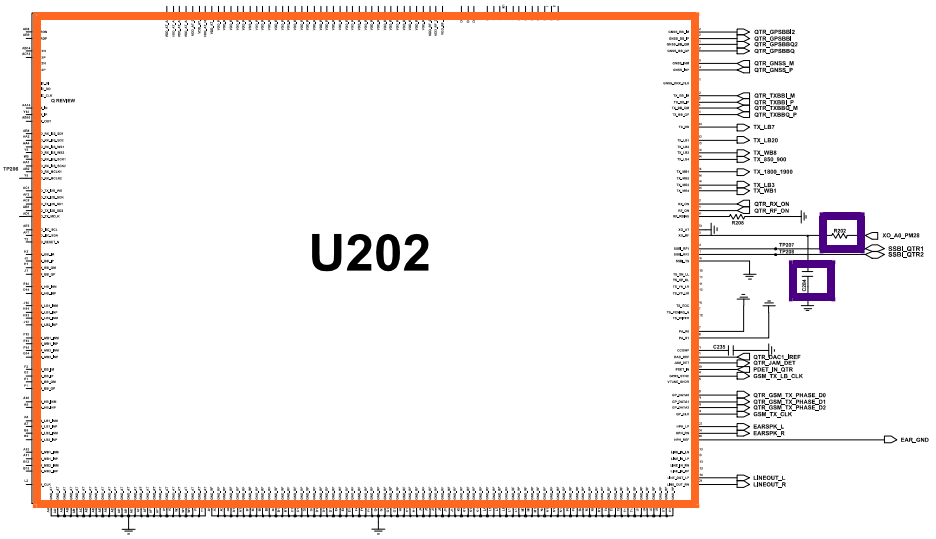


SMPS for VPAM

LTE B7



U202

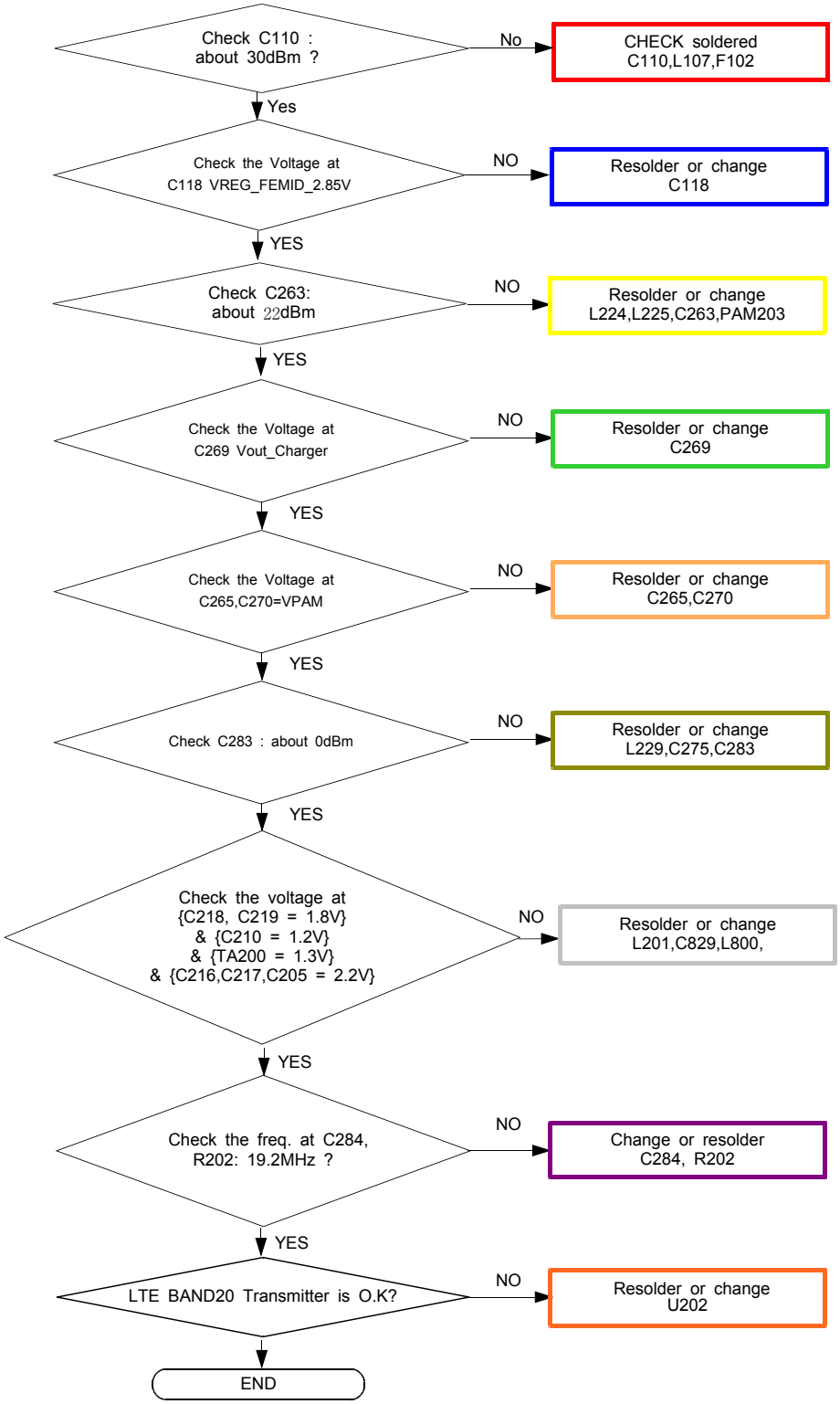


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

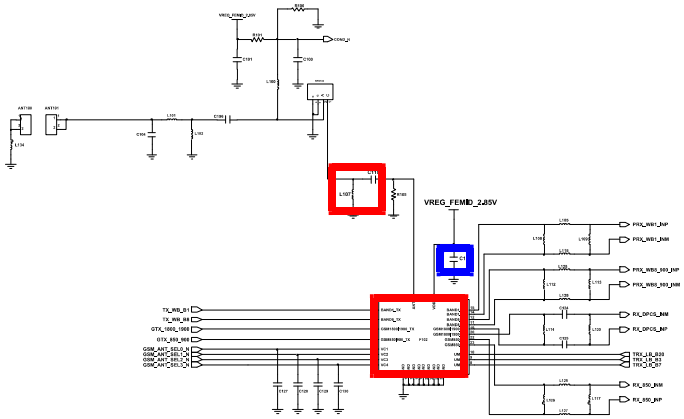
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-26. LTE BAND20 TX

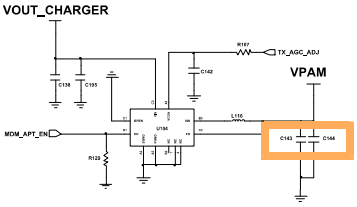
CONTINOUS TX ON CONDITION
TX POWER DAC:120 CODE APPLIED
CH : 24300
RBW : 100KHz
VBW : 100KHz
SPAN : 40MHz
REF LEV. : 10dBm
ATT. : 20dB



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

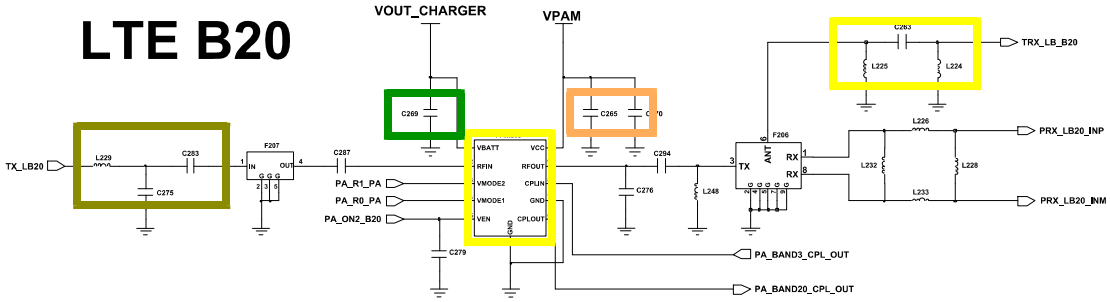


SWITCH(MAIN)

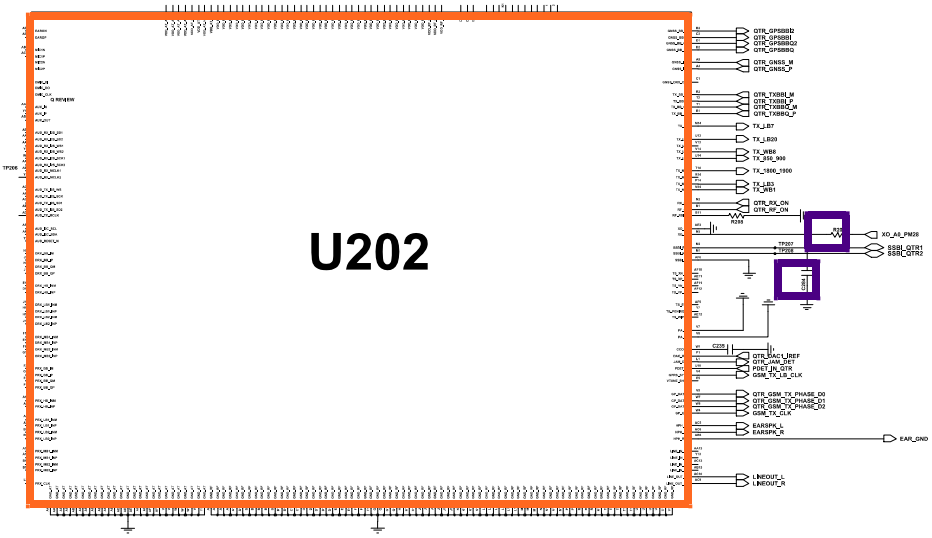


SMPS for VPAM

LTE B20



U202



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

9. Reference Abbreviate

Reference Abbreviate

—AAC: AdvancedAudioCoding.
—AVC: AdvancedVideoCoding.
—BER: BitErrorRate
—BPSK: BinaryPhaseShiftKeying
—CA: ConditionalAccess
—CDM: CodeDivisionMultiplexing
—C/I: CarriertoInterference
—DMB: DigitalMultimediaBroadcasting
—두: EuropeanStandard
—ES: ElementaryStream
—ETSI: EuropeanTelecommunicationsStandardsInstitute
—MPEG: MovingPictureExpertsGroup
—PN: Pseudo-randomNoise
—PS: PilotSymbol
—QPSK: QuadraturePhaseShiftKeying
—RS: Reed-Solomon
—SI: ServiceInformation
—TDM: TimeDivisionMultiplexing
—TS: TransportStream

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

SAMSUNG
ELECTRONICS

This Service Manual is a property of Samsung Electronics Co.,Ltd.
Any unauthorized use of Manual can be punished under applicable
International and/or domestic law.

© Samsung Electronics Co.,Ltd.

2011. 12. Rev.1.0

www.s-manuals.com